

6. Draft Section 4(f) Evaluation

6.1 Introduction

The Maryland Transit Administration (MTA), in coordination with the Federal Transit Administration (FTA), is proposing the Red Line light rail transit (LRT) line, which would extend from western Baltimore County to the eastern edge of Baltimore City. The proposed 14.1 mile east-west LRT line would connect the areas of Woodlawn, Edmondson Village, West Baltimore, downtown Baltimore, Inner Harbor East, Fell's Point, Canton, and the Johns Hopkins Bayview Medical Center campus. The Red Line project is intended to improve system connectivity, transportation choices, and mobility in the project study corridor, support economic development efforts, and help improve regional air quality.

As part of the Red Line Corridor Transit Study Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) published in September 2008, public parks, recreation land or open space, and land owned by public agencies were initially identified within the Red Line project study corridor. No Program Open Space properties were identified. Based on reconnaissance surveys and intensive field surveys, historic resources were also initially identified within the original Area of Potential Effects (APE) for the AA/DEIS. MTA undertook a substantial effort to avoid and minimize impacts to Section 4(f) resources as part of the alternatives development process. However, because detailed limits of disturbance were not available at the time, specific impacts to resources protected by Section 4(f) of the US Department of Transportation Act (refer to **Section 6.2**) were not known or fully evaluated in the AA/DEIS. It was anticipated that any impacts to Section 4(f) resources as a result of the Red Line project would be de minimis, and would not require a Section 4(f) avoidance alternatives and least overall harm analysis. Therefore, a concurrent Draft Section 4(f) Evaluation was not prepared. Since the issuance of the AA/DEIS, the project has advanced into Preliminary Engineering, and more detailed design has occurred in the development of the Preferred Alternative. Subsequent to the announcement of the Locally Preferred Alternative (LPA) in August 2009, MTA has continued to refine the LPA. The refinements were made based on: public and stakeholder input, station planning, and additional engineering (including ridership, transit operations and constructability), which resulted in reduced environmental impacts, reduced project costs, and improved safety. These refinements have been incorporated in the Preferred Alternative. The Preferred Alternative is being documented and analyzed as part of the project's Final Environmental Impact Statement (FEIS) and is also described in **Section 6.3**.

This Draft Section 4(f) Evaluation has been prepared to assess the likely effects of the Red Line project's Preferred Alternative upon Section 4(f) resources located within the project study corridor, and to evaluate alternatives that avoid or minimize impacts caused by the Red Line project to those resources. This Draft Section 4(f) Evaluation is being circulated with the project's FEIS. Upon receipt of comments received on the Draft Section 4(f) Evaluation, a Final Section 4(f) Evaluation will be circulated as part of the Red Line project's Record of Decision (ROD). The Final Section 4(f) Evaluation will provide a final determination by the FTA and the US Department of Interior (DOI) as to whether feasible and prudent avoidance alternatives to the project's use of Section 4(f) resources exist, whether all possible planning to minimize harm to the resources has been performed, and recommended mitigation for unavoidable impacts.

This Draft Section 4(f) Evaluation provides notification of FTA’s intent to pursue de minimis impact findings for park and recreation properties and historic sites that would be affected by the construction and operation of the Red Line project. The proposed de minimis findings are based on preliminary coordination with the officials with jurisdiction. Final de minimis impact determinations would be made following continued coordination with the officials with jurisdiction over the resource(s). Pursuant to 23 CFR 774.5(b)(2), all potential de minimis impacts are being presented for public review and comment with the FEIS, in conjunction with the requirements of National Environmental Policy Act (NEPA). The 45-day comment period for the FEIS also applies to comments on the proposed de minimis impact findings.

Section 4(f) resources were identified along the Preferred Alternative, including 78 historic sites and 11 publicly-owned public parks and recreational facilities. A complete list of resources that are protected under Section 4(f) within the project study corridor is included in **Appendix J, Attachment 1**.

Based upon the Preliminary Engineering undertaken for the Red Line project, it is anticipated that the Preferred Alternative would result in:

- Temporary occupancy (not a use) of three parklands and one historic property;
- De minimis impacts to two parklands and nine historic sites (individual properties and historic districts); and
- Section 4(f) use within the Business and Government Historic District because of the demolition of two contributing properties under the Preferred Alternative Proposed Inner Harbor Station, requiring both avoidance and least overall harm analyses.

There would be no constructive use of Section 4(f) resources as a result of the construction and operation of the Red Line project. **Figure 6-1** presents the Preferred Alternative alignment and identifies the Section 4(f) resources that would be affected by the Red Line.

6.2 Regulatory Framework and Applicability to the Red Line Project

This Draft Section 4(f) Evaluation has been prepared pursuant to Section 4(f) of the US Department of Transportation Act, 49 U.S.C. 303(c), and with the FTA’s Section 4(f) regulations in 23 CFR Part 774.

6.2.1 Applicability

Section 4(f) of the US Department of Transportation Act of 1966, 49 USC 303(c) requires that the proposed use of land from any significant publicly-owned public park, recreation area, wildlife and/or waterfowl refuge, or any significant historic site may not be approved as part of a federally-funded or approved transportation project unless:

- FTA determines that there is no feasible and prudent avoidance alternative to the use of land from the property, and the action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3(a)); or
- FTA determines that the use of the Section 4(f) properties, including any measures to minimize harm (such as avoidance, minimization, mitigation, or enhancements measures) committed to by the applicant, would have a de minimis impact on the property (23 CFR 774.3(b)).

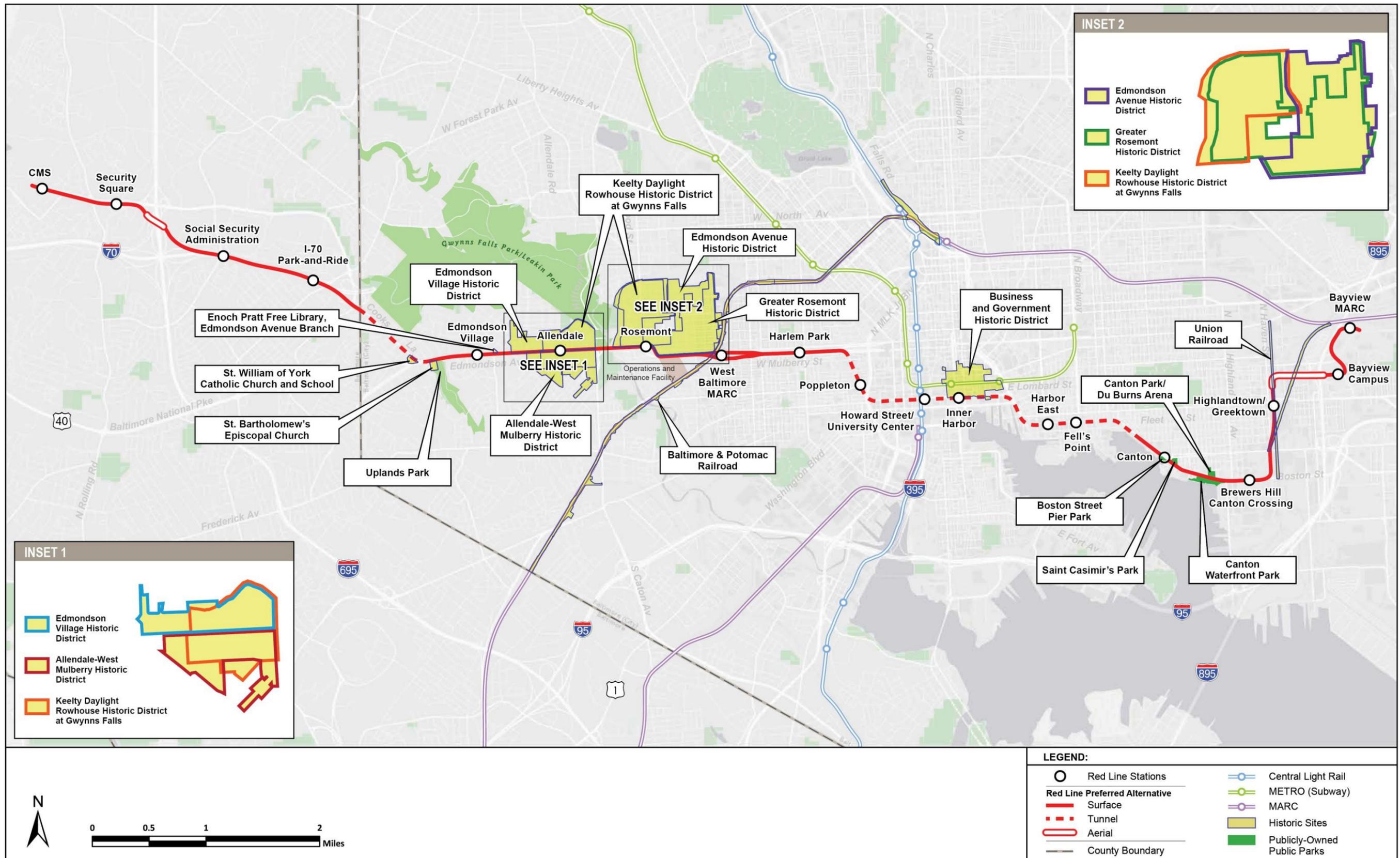


Figure 6-1: Section 4(f) Resources Affected by the Red Line Preferred Alternative

6.2.2 Use

Pursuant to 23 CFR 774.17, a “use” of Section 4(f) property occurs:

- When land is **permanently incorporated** into a transportation facility;
- When there is a **temporary occupancy** of land that is adverse in terms of the statute's preservation purpose as defined in 23 CFR 774.13(d); that is, when one of the following criteria for temporary occupancy are not met:
 - The duration of the occupancy must be less than the time needed for the construction of the project, and no change of ownership occurs.
 - Both the nature and magnitude of the changes to the Section 4(f) land are minimal.
 - No permanent adverse physical changes, nor interference with activities or purposes of the resources on a temporary or permanent basis, are anticipated.
 - The land must be returned to a condition that is at least as good as existed prior to the project.
 - There is documented agreement with the appropriate Federal, State, or local officials having jurisdiction over the land that the above conditions have been met.
- When there is a **constructive use** of a Section 4(f) property. As defined in 23 CFR 774.15, a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

6.2.3 Feasible and Prudent Avoidance Alternative

A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute. The preservation purpose of Section 4(f) is described in 49 U.S.C. 303(a), which states: “It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

An alternative is not **feasible** if it cannot be built as a matter of sound engineering judgment.

An alternative is not **prudent** if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- It results in unacceptable safety or operational problems;
- It causes severe social, economic, or environmental impacts even after reasonable mitigation; severe disruption to established communities; severe disproportionate

impacts to minority or low income populations; or severe impacts to environmental resources protected under other Federal statutes;

- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- It causes other unique problems or unusual factors; or
- It involves multiple factors above that while individually minor, cumulatively cause unique problems, or impacts of extraordinary magnitude.

6.2.4 All Possible Planning

All possible planning means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project.

For public parks, recreation areas and wildlife and waterfowl refuges, the measures may include (but are not limited to): design modifications or design goals; replacement of land or facilities of comparable value and function; or monetary compensation to enhance the remaining property or to mitigate the adverse impacts of the project in other ways.

For historic sites, the measures normally serve to preserve the historic activities, features, or attributes of the site as agreed by the FTA and the official(s) with jurisdiction over the Section 4(f) resource in accordance with the consultation process under 36 CFR Part 800.

In evaluating the reasonableness of measures to minimize harm, the FTA would consider the preservation purpose of the statute and:

- The views of the official(s) with jurisdiction over the Section 4(f) property;
- Whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property; and
- Any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.

6.2.5 De Minimis Impacts

De minimis impacts to Section 4(f) resources are those impacts that would have no adverse effect on the protected resource.

For parks, de minimis impacts are defined as those that do not adversely affect the activities, features, and attributes of the resource. The official with jurisdiction over the park or property must concur in writing that the project would not adversely affect the resource.

For historic properties, a de minimis impact finding may be made if a “no historic properties affected” or “no adverse effect” determination is made through the Section 106 process and concurred upon by the Maryland Historical Trust (MHT), the State Historic Preservation Officer

(SHPO). For historic districts, the de minimis finding would be made for individual properties rather than the historic property as a whole.

After consideration of impact avoidance, minimization, and mitigation or enhancement measures, the FTA may determine that use of a Section 4(f) property results in a de minimis impact. In such cases, an analysis of avoidance alternatives is not required.

If the official with jurisdiction does not agree with a de minimis impact finding, an analysis of avoidance alternatives must be conducted. If the analysis concludes that there is no feasible and prudent alternative to use of the Section 4(f) resource, FTA may only approve the alternative that causes the least overall harm. A least overall harm analysis would be conducted to determine which alternative may proceed.

A de minimis finding cannot be made if there is a “constructive” use of a Section 4(f) property.

6.3 Proposed Action

6.3.1 Purpose of the Project

The Red Line project is just one step in the ongoing development of an interconnected regional transit system that would improve the quality of transit service in the Baltimore Region. The purpose of the Red Line project is to provide the following improvements in the project study corridor, which extends from the Centers for Medicare & Medicaid Services (CMS) in Baltimore County to the Johns Hopkins Bayview Medical Center campus in Baltimore City:

- Improve transit efficiency by reducing travel times for transit trips in the corridor
- Increase transit accessibility in the corridor by providing improved transit access to major employment and activity centers
- Provide transportation choices for east-west commuters in the corridor by making transit a more attractive option
- Enhance connections among existing transit routes in the corridor
- Support community revitalization and economic development opportunities in the corridor
- Help the region improve air quality by increasing transit use and promoting environmental stewardship

6.3.2 Project Need

The needs that exist in the project study corridor are:

- Roadway congestion contributes to slow travel times for automobiles and buses in the corridor
- Lack of convenient transit access to existing and future activity centers in the corridor, including downtown Baltimore, Fell’s Point, and Canton, as well as employment areas in Baltimore County to the west of Baltimore
- Lack of viable transit options for east-west commuters in the corridor

- Lack of connections from existing transit routes (including Central Light Rail, Metro, MARC, and bus network) to the I-70 travel market on the west side of the corridor, and to the I-95 and East Baltimore travel markets on the east
- Need for economic development and community revitalization in communities along the corridor, both in Baltimore County and in Baltimore City
- Need to support the regional goal of improving air quality by providing alternatives to automobile usage

6.4 Preferred Alternative

The Red Line is a proposed 14.1-mile east-west light rail transit line that would connect the CMS in Woodlawn (Baltimore County), and Edmondson Village, West Baltimore, downtown Baltimore, Inner Harbor East, Fell's Point, Canton and the Johns Hopkins Bayview Medical Center campus (Baltimore City). The majority of the project study corridor, approximately 11 miles, falls within Baltimore City. As shown on **Figure 6-2**, the transitway includes a combination of surface, tunnel and aerial segments.

6.4.1 Alignment

For presentation purposes, the project study corridor has been divided into five design segments consisting of three at-grade/aerial segments and two tunnel segments totaling approximately 14.1 miles. From west to east, these segments are: West; Cooks Lane Tunnel; US 40; Downtown Tunnel; and East. **Figure 6-2** identifies these five design segments in relation to the Preferred Alternative.

a. West Segment (2.9 miles)

The west segment would begin in Baltimore County at the CMS Station, a center platform station, located west of Rolling Road on the south side of Security Boulevard. At the western end of the Preferred Alternative, 380 feet of tail track would be provided beyond the station for the purpose of operation flexibility. The Preferred Alternative would traverse east in an exclusive right-of-way adjacent to the south side of Security Boulevard. The Preferred Alternative would then extend east with at-grade crossings at Greengage Road, Brookdale Road, Boulevard Place Shopping center entrance, and Rolling Road. From Rolling Road, the Preferred Alternative would run adjacent and parallel to the south side of Security Boulevard and along the northern boundary of Security Square Mall crossing Lord Baltimore Drive at grade. The Preferred Alternative would continue to the center platform Security Square Station located immediately west of Belmont Avenue. A park-and-ride lot is proposed at this station and at full development would have between 325-375 parking spaces.

The Preferred Alternative would extend east across Belmont Avenue at grade to the west side of I-695 (Baltimore Beltway), continuing southeast, and crossing the interchange diagonally on an aerial structure over I-695. The Preferred Alternative would continue adjacent to the existing parking lots at the Social Security Administration (SSA) west campus and along the north side of the I-70 ramp to I-695. The Preferred Alternative would continue east transitioning onto the existing excess pavement of westbound I-70, just west of Woodlawn Drive, to the center platform SSA Station on the existing bridge over Woodlawn Drive.

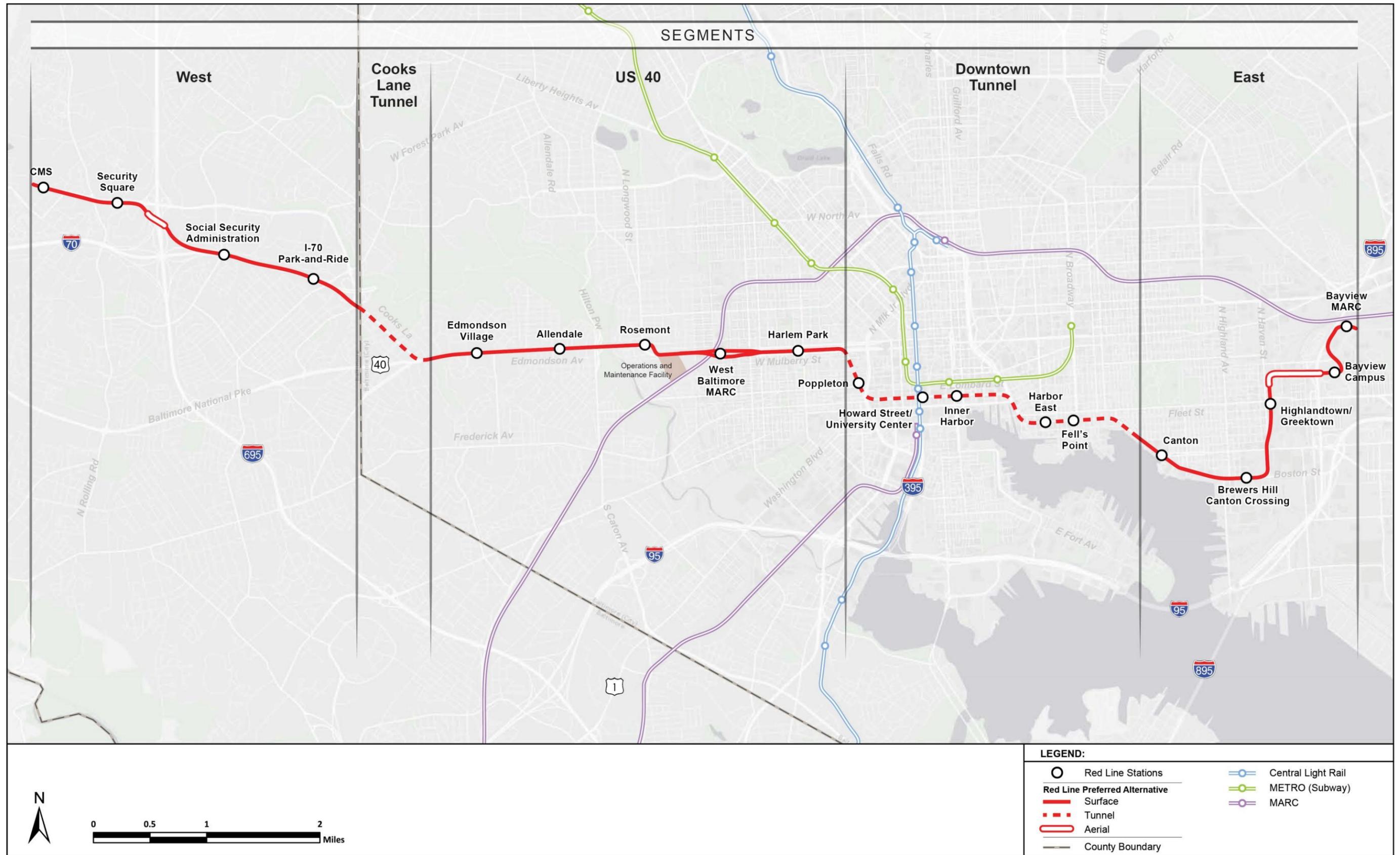


Figure 6-2: Preferred Alternative

Continuing east, the Preferred Alternative would cross at grade with a roadway connection from I-70 to Parallel Drive and continue on the former roadway pavement to the I-70 Park-and-Ride Station. The station and park-and-ride facility are located west of Ingleside Avenue occupying the former on-ramps to the former westbound I-70. Initially, the I-70 Park-and-Ride lot would have between 650 and 700 parking spaces with the opportunity for expansion, and could be expanded in the future.

Continuing east of the I-70 Park-and-Ride Station, the Preferred Alternative would cross over Ingleside Avenue on an existing bridge and curves in a southeast direction to the tunnel portal for the Cooks Lane Tunnel segment described below.

b. Cooks Lane Tunnel (1.3 miles)

The Preferred Alternative surface alignment would transition to a retained cut section in the southwest quadrant of the existing cloverleaf interchange at the end of I-70. This existing interchange loop ramp would be removed as part of the project. This tunnel section would begin through the portal on the northwest side of the intersection of Cooks Lane/Forest Park Avenue/Security Boulevard. The tunnel alignment would continue southeast under the intersection in a twin-bore tunnel beneath Cooks Lane crossing into Baltimore City. The tunnel would continue southeast centered under Cooks Lane to north of Coleherne Road; then curve left towards Edmondson Avenue and continue east following the centerline of Edmondson Avenue. The tunnel would continue along the centerline of Edmondson Avenue ascending through a portal section to meet grade approximately 400 feet west of Swann Avenue (**Figure 6-3**).

c. US 40 Segment (3.3 miles)

The US 40 segment would begin after the tunnel portal, continuing east in an exclusive right-of-way along the median of Edmondson Avenue crossing Swann Avenue at grade to the Edmondson Village Station. This center-platform station is located mid-block between Swann Avenue and North Athol Avenue.

The Preferred Alternative would continue east in the median of US 40 with at-grade crossings at traffic signal-controlled intersections at North Athol Avenue, Wildwood Parkway, and North Loudon Avenue to the Allendale Station at the intersection of US 40 and Allendale Street. The Allendale Station would have a split platform with the westbound platform located on the west side of the Allendale Street and the eastbound platform located on the east side to the intersection. The Preferred Alternative would continue east at grade across Denison Street and Hilton Street. The Preferred Alternative would cross over the Hilton Parkway and Gwynns Falls in the center of an existing aerial structure. Baltimore City is currently developing plans to replace the existing Edmondson Avenue Bridge designed to include accommodations for the Red Line.

The Preferred Alternative would continue east at grade through the Edmondson Avenue (US 40)/Franklin Street intersection and Poplar Grove Street. The Rosemont Station platform would be located in the center of Edmondson Avenue east of Poplar Grove Street. East of the Rosemont Station, the Preferred Alternative would turn right and traverse south along the center of Franklinton Road. At the intersection of Franklinton Road and Franklin Street, the alignment would turn left and continue east along the median of US 40/Franklin Street. This is

also the proposed location for the operations and maintenance facility site (OMF) on the south side of Franklin Street.

Figure 6-3: Rendering of the Proposed Tunnel Portal on Edmondson Avenue



Following the existing roadway, the Preferred Alternative would split near Wheeler Avenue and continue east diverging to cross under the Amtrak Northeast Corridor. The Preferred Alternative would maintain the existing structures over West Franklin Street and West Mulberry Street with minor modifications to the bridge structures, roadway, and utilities to protect the structures. The eastbound track would be adjacent to the north side of Mulberry Street, crossing under the existing Amtrak Bridge to the West Baltimore MARC Station eastbound platform located at the northwest corner of Smallwood Street and Mulberry Street. The West Baltimore MARC Station westbound platform is located at the southwest corner of Smallwood Street and Franklin Street. The westbound track is adjacent to the south side of Franklin Street. The split tracks would continue east along the edge of the West Baltimore MARC parking lots with separate at-grade crossings of Pulaski Street and Payson Street. The separate tracks converge from Franklin and Mulberry Streets just west of the North Fulton Avenue Bridge.

The Preferred Alternative would continue east in the median of the existing US 40 lower level roadway corridor. The tracks would split east of the Stricker Street pedestrian bridge onto the eastbound left lane of the US 40 corridor. The Harlem Park Station, a center-platform station, would be located between Calhoun Street and Carey Street. East of Carey Street the tracks would merge back to double-track before passing under the existing pedestrian bridge at Carrollton Avenue. The Preferred Alternative would continue under the Arlington Avenue Bridge to the portal for the Downtown Tunnel.

d. Downtown Tunnel (3.4 miles)

The tunnel would begin in the median of US 40 immediately west of the North Schroeder Street Bridge and would continue east descending into the tunnel portal within the median of US 40. The tunnel would then curve underneath Mulberry Street and continue south, beneath Fremont Avenue to the proposed underground Poppleton Station located immediately north of Baltimore Street. The entrance to the underground Poppleton Station would be located at the northeast corner of the intersection of Fremont Avenue and Baltimore Street.

The tunnel alignment would continue south and curve east crossing underneath Martin Luther King, Jr. Boulevard to the center of Lombard Street. The tunnel would continue east beneath Lombard Street to the underground Howard Street/University Center Station, located immediately east of Howard Street. The entrance to the underground station would be located at the northeast corner of Howard and Lombard Streets. The Preferred Alternative would cross under the existing CSX railroad tunnel beneath Howard Street just west of the proposed station.

The tunnel alignment would continue east to the underground Inner Harbor Station located underneath Lombard Street between Light and Calvert Streets. The entrance to the station would be located at the northeast corner of Lombard and Light Streets and along the north side of Lombard Street west of Calvert Street. From this station there would also be a pedestrian tunnel underneath Light Street to provide a direct connection to the Charles Street Metro Station located underneath Baltimore Street.

The Downtown Tunnel alignment would continue underneath Lombard Street until Market Place where the alignment curves south centered underneath President Street to Fleet Street. The tunnel alignment would then turns east, underneath Fleet Street to the underground Harbor East Station located east of Central Avenue.

The alignment would continue east centered underneath Fleet Street to the underground Fell's Point Station on the west side of Broadway. The entrance to the underground station would be located in the median of Broadway north of Fleet Street.

The tunnel alignment would continue east underneath Fleet Street to Washington Street and would turn southeast under Chester Street to Boston Street. The tunnel would continue southeast underneath Boston Street to a tunnel portal east of the intersection with Montford Avenue/Hudson Street ascending through a portal section to the median of Boston Street at surface (**Figure 6-4**).

e. East Segment (3.2 miles)

The Preferred Alternative would continue southeast at grade in the median of Boston Street to the Canton Station. The Canton Station would be a center platform station located west of the signalized intersection at South Lakewood Avenue.

Boston Street would be developed as one-lane in each direction full-time from Montford Avenue to Conkling Street. The Preferred Alternative would continue along the center of Boston Street with at-grade crossings at the signalized intersections of South Lakewood

Avenue, South Kenwood Street, Potomac Street (pedestrians only), South East Street, South Clinton Street, and South Conkling Street to the Brewers Hill/Canton Crossing Station. This center-platform station would be located between South Conkling and South Eaton Streets and would include a park-and-ride lot with approximately 500-600 parking spaces.

Figure 6-4: Rendering of Proposed Tunnel Portal on Boston Street



The Preferred Alternative would continue east at grade across Eaton Street and would transition diagonally on new right-of-way turning north on the west side of Haven Street. The Preferred Alternative would continue north adjacent to the west side of Haven Street crossing under the O'Donnell Street Bridge into the Canton Railroad right-of-way. The Preferred Alternative would then turn northeast crossing South Haven Street at grade into the Norfolk Southern (NS) right-of-way. The Preferred Alternative would continue north within the NS right-of-way to the Greentown/Highlandtown Station, a side platform station, which would be located south of Old Eastern Avenue. The Preferred Alternative would occupy the western portion of the NS right-of-way, a currently inactive railroad right-of-way referred to as Bear Creek Branch.

The Preferred Alternative would continue north over Eastern Avenue on an existing freight railroad bridge ascending and turning east onto a new aerial structure, passing overhead of the proposed NS freight track. The structure would cross above Janney Street, Kresson Street, CSX railroad, NS railroad, Oldham Street, Ponca Street, and I-895 to a proposed future Cassell Drive adjacent to the Johns Hopkins Bayview Medical Center property. The Preferred Alternative would continue east at grade along the alignment of Alpha Commons Drive to the Bayview Campus Station. This center platform station would be located immediately west of Bayview Boulevard. The Preferred Alternative would turn north at grade on the east side of Bayview

Boulevard continuing north adjacent to Bayview Boulevard with at-grade crossings of Nathan Shock Drive, a National Institutes of Health (NIH) driveway, and Lombard Street. The Preferred Alternative would continue north turning northeast along the eastside of I-895 to the proposed Bayview MARC Station, the eastern terminus of the Preferred Alternative. A park-and-ride lot with approximately 600 parking spaces is proposed as part of a new Bayview MARC Station, which is a separate project to be implemented by the MTA and Baltimore City. At the eastern end of the alignment, 380 feet of tail track would be provided beyond the station for the purpose of operation flexibility.

6.4.2 Stations

The Preferred Alternative would include 19 stations (14 surface and 5 underground). The proposed station locations have been identified based upon compatibility with surrounding site conditions, intended passenger catchment areas, site circulation, site services and amenities, transit oriented development opportunities, public space availability, future urban plan visioning, and community input through the Station Area Advisory Committees (SAACs). The proposed stations are identified in **Table 6-1**.

Stations along the alignment would have one of three types of platforms: center, side, and split. All surface station platforms would be approximately 194 feet long regardless of the type of platform. Examples of typical surface station platforms are presented in **Figure 6-5**.

Two surface stations would be grade separated: SSA which would be located on an existing bridge embankment and Harlem Park which would be located in the lower level of US 40. Therefore, these stations would include vertical circulation access elements such as stairs and ramps, or elevators for access to the platform. The stations would be designed in accordance with the Americans with Disabilities Act (ADA) to be fully accessible, barrier-free and user-friendly access for transit customers and personnel.

For the underground stations, there are two-level and three-level station designs currently being advanced (refer to **Figure 6-6**). The depth of the tunnel and station vary with the unique site conditions at each of the proposed five underground stations. Three-level stations are proposed in areas where the tunnel alignment is deep because of street utilities, vertical tunnel profile, and/or structural/geotechnical requirements. Patrons would enter from street-level entrances and descend to the public mezzanine level by elevator, escalator, or stairs; pay their fare; and then descend another level to the station platform (refer to **Figure 6-7**).

Table 6-1: Proposed Red Line Project LRT Stations

Station Name ¹	Station Type	Platform Type
CMS	At grade	Center
Security Square	At grade with park-and-ride	Center
Social Security Administration	At grade	Center
1-70 Park & Ride	At grade with park-and-ride	Center
Edmondson Village	At grade	Center
Allendale	At grade	Split Side

Table 6-1: Proposed Red Line Project LRT Stations

Station Name ¹	Station Type	Platform Type
Rosemont	At grade	Center
West Baltimore MARC	At grade with park-and-ride	Side
Harlem Park	Grade separated	Center
Poppleton	Underground; 2-level	Center
Howard Street/University Center	Underground; 3-level	Center
Inner Harbor	Underground; 2-level	Center
Harbor East	Underground; 3-level	Center
Fell's Point	Underground; 3-level	Center
Canton	At grade	Center
Brewers Hill/Canton Crossing	At grade with park-and-ride	Center
Highlandtown/Greektown	At grade	Side
Bayview Campus	At grade	Center
Bayview MARC	At grade with park-and-ride	Center

Note: ¹The station names are not final and would be determined with input from the communities as the design process continues.

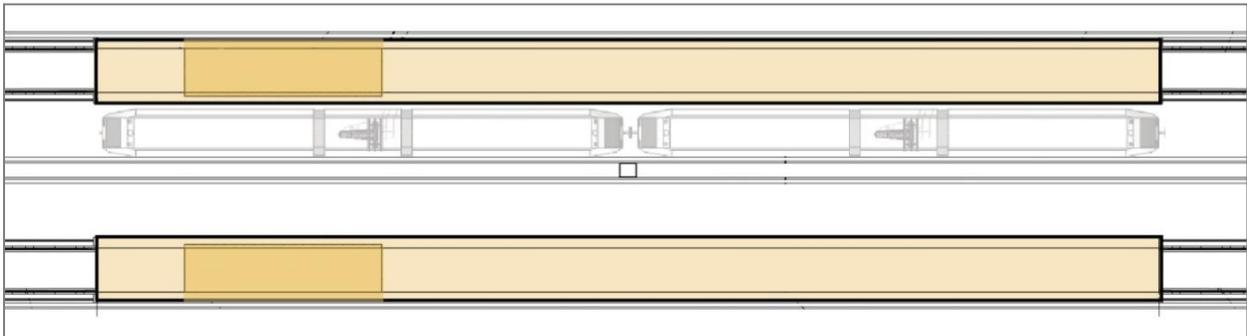
Each underground station would also have an accompanying ancillary building, which would house mechanical equipment, traction power substations, and ventilation shafts (refer to **Figure 6-8**). To meet the ventilation objectives, each underground station facility would contain two independent ventilation shafts, each containing two fans. Each shaft would connect to the tunnels at opposite ends of the station. In order to remove train-generated heat during operations, each shaft would include a fan system by-pass to allow the exchange of tunnel air with outside air. The fans would be reversible to either supply air to the tunnels, or exhaust from the tunnels.

These ancillary buildings would be up to 60-feet high, depending on the station and the ventilation requirements. The buildings for the two-level stations would be larger than those for the three-level stations. Each building would be designed to be compatible with surrounding structures and would contain the following internal components: transformers for power supply, staircases for access/egress, four fans, a battery room, and a series of silencers above the fans to attenuate their noise.

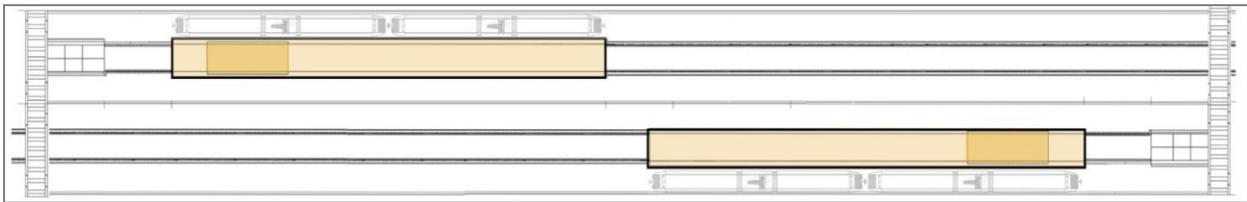
Two stations would provide connections to the existing MARC system: the West Baltimore MARC Station and the Bayview MARC Station. The Howard Street/University Center Station would provide a connection to the existing Central Light Rail Line. The Inner Harbor Station would provide a connection to the existing Charles Center Metro Station.

Figure 6-5: Examples of Typical Surface Station Platforms

Typical Side Platform Layout – Surface Station



Typical Split Platform Layout – Surface Station



Typical Center Platform- Surface Station

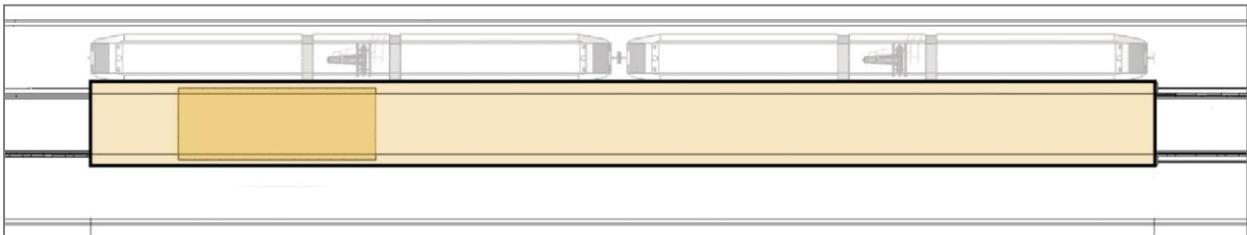


Figure 6-6: Underground Station Cross Sections



Figure 6-7: Typical Underground Station Entrance



Figure 6-8: Rendering of a Typical Ventilation Structure



6.4.3 Track Types

The following four types of track are being considered for this project:

- *Ballasted track* – consist of rail, fasteners, crossties, and the ballast/sub ballast bed and would be used in areas in the corridor such as on the I-70 right-of-way and along the NS freight tracks on the east side of the corridor;
- *Embedded track* – is completely covered/embedded, except for the top of the rail and would be used at roadway grade crossings such as intersections;
- *Direct fixation* – is a track construction method in which the rails are directly affixed to a concrete deck or base slab, and would be used for tracks on aerial structures and in tunnels; and,
- *Green track* – is defined as a transitway designed for plant material to grow alongside and in between the rails. Green track, as shown in the photo above, is being considered in the portions of the corridor through residential communities such as along US 40/Edmondson Avenue and Canton.



Green track transitioning to ballasted track

6.4.4 Proposed Systems' Elements

In order to achieve effective, efficient operation, the Preferred Alternative would include traction power substations, communications, video surveillance, signaling, overhead catenary system, and fare collection.

a. Traction Power Substations

To provide electricity along the line for the light rail vehicles, 17 traction power substations (TPSS) are proposed and would be located along the alignment. The TPSS require approximately 45-foot by 85-foot sites plus access roads or driveways. A typical TPSS would be constructed of steel housing and depending on the location, could be surrounded by fencing, a brick wall, landscaping, or other forms of aesthetic barriers. Examples of existing TPSS for other light rail projects in the US are shown below.



The TPSS would be spaced along the alignment, approximately one mile apart. Two TPSS locations would be within underground stations and one location would be within the proposed operations and maintenance facility. Preliminary locations for TPSS sites have been identified for analysis and are shown on **Figure 6-9**. Final substation locations would be determined during Final Design for the project.

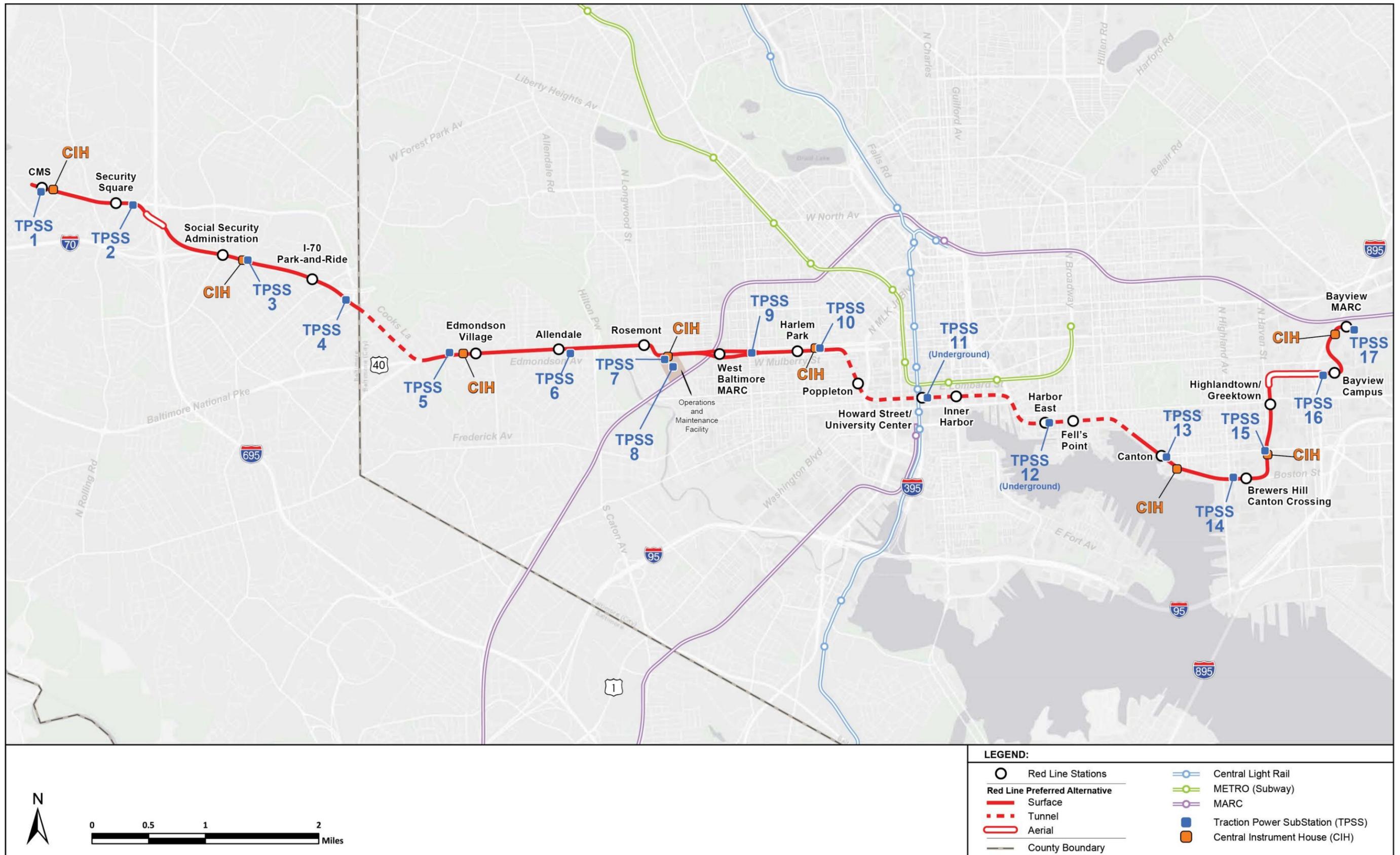


Figure 6-9: Proposed Locations for Traction Power Substations and Central Instrument Houses along the Red Line Project Study Corridor

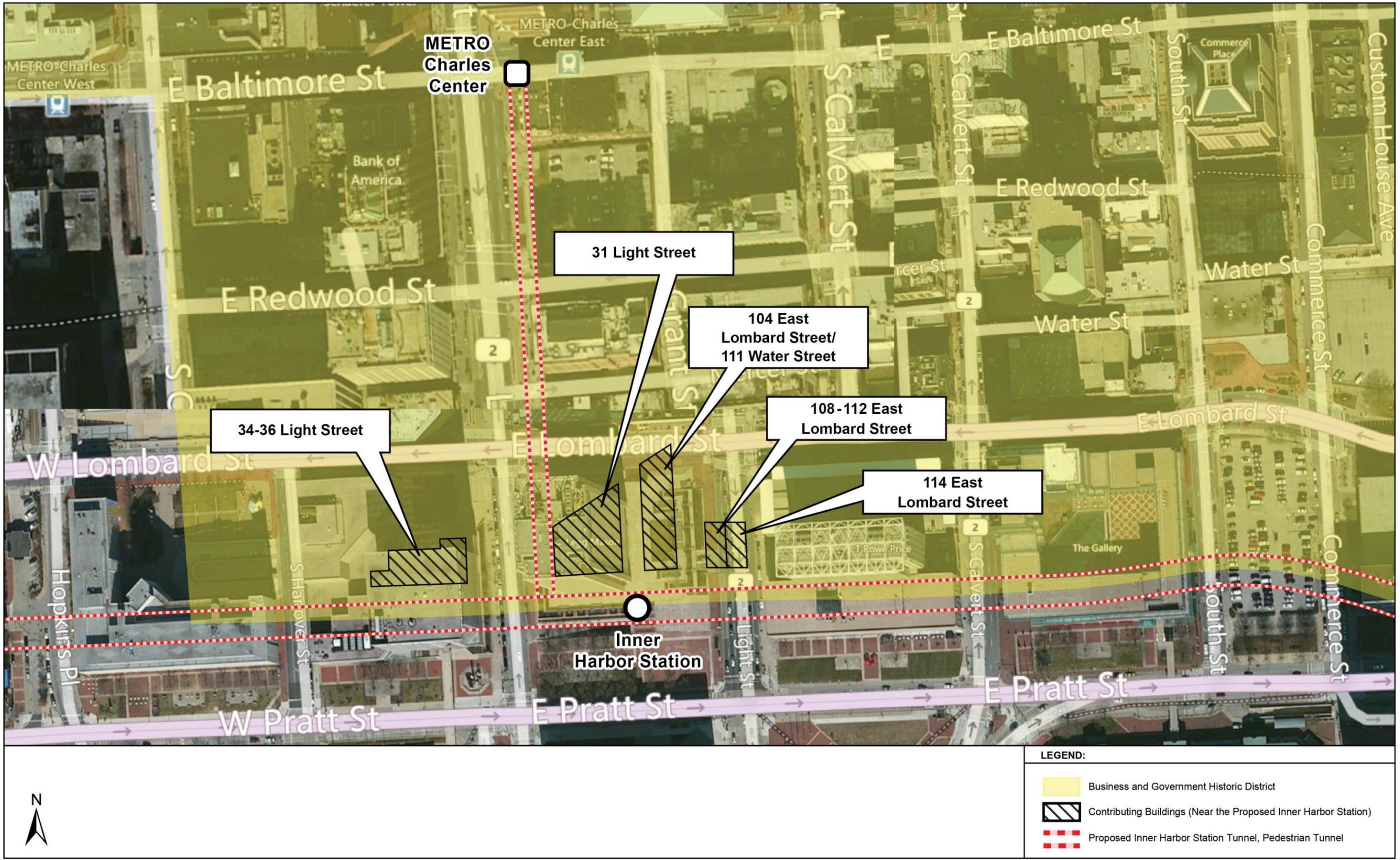


Figure 6-10: Location of Proposed Inner Harbor Station

b. Signal Central Instrument Houses

The signal CIH would contain elements of the signaling control system, circuits, and equipment required for safe vehicle operation. Currently, eight CIHs are planned along the alignment. The distances between the signal houses vary and are based on the locations of the crossover tracks where light rail vehicles can switch tracks. The CIH structures are prefabricated steel structures approximately 10 feet by 40 feet and 10 feet high. Preliminary locations for the CIH have been identified for analysis in the FEIS document and are shown on **Figure 6-9**.

6.4.5 Preferred Alternative Proposed Inner Harbor Station Location

The proposed Inner Harbor Station would be located at the southern boundary of the Business and Government Historic District (refer to **Figure 6-10** on previous page). Under the Preferred Alternative, the Inner Harbor Station would consist of a two-level underground station. The station structure would be approximately 300 feet long, located beneath East Lombard Street between Light and Calvert Streets. The Inner Harbor Station entrance would be located at the northeast corner of East Lombard and Light Streets. This location would best accommodate a pedestrian tunnel underneath the east sidewalk of Light Street to allow a direct connection to the Charles Center Metro Station, located approximately two blocks to the north beneath Baltimore Street. Emergency exits would be constructed in the sidewalk on the south side of Lombard Street.

The underground station structure and the pedestrian tunnel would be constructed using the cut-and-cover excavation method. In this method, construction of the station structure and pedestrian tunnel would involve excavation of soil and/or rock from the surface, extending to the depth of a finished trench. Retaining walls would be constructed to prevent the sides of the excavation from collapsing. In typical urban settings, one side of the street is excavated to a sufficient depth to allow for the trench to be decked, and then excavation begins on the other side of the street. The concept developed for the Red Line project involves excavating trenches perpendicular to the street. Steel support beams are placed in the trenches and supported by the retaining walls constructed to support the sides of the excavation. Removable concrete planks are placed on top of the steel support beams to create a working platform for construction and a roadway surface for vehicles. Excavation then proceeds below the temporary decking structure. Following construction of the underground components, the roadway and surrounding areas would be restored.

The Inner Harbor Station would be located within the National Register listed Business and Government Historic District. As with the other underground stations within the project study corridor, the Inner Harbor Station structures would house ventilation, smoke control, and equipment rooms located, in part, at the surface level. At the Inner Harbor Station, the structures proposed would be located at the site of two vacant buildings located at 108-12 and 114 East Lombard Street.

These two vacant buildings, as well as several others in the vicinity, are contributing buildings to the historic district. A detailed description of the impacts and cost of the Preferred Alternative proposed Inner Harbor Station are presented in **Section 6.9** and **Section 6.10**.

6.5 Section 4(f) Properties

6.5.1 Publicly-Owned Public Parks and Recreation Areas

A park or recreation area is afforded federal protection under Section 4(f) if:

- it is publicly-owned, meaning the property is owned and operated by a public entity, or the public entity has a proprietary interest in the property, such as an easement;
- it is open to the public for visitation for more than a select group of the public at any time during normal hours of operation;
- the primary purpose of the property is recreation, (lands used primarily for non-recreational purposes but that host recreational activities do not have recreation as a primary purpose); and
- it is significant as a park or recreation area, meaning that the resource plays an important role in meeting the park and recreational objectives of the community, as determined by the official with jurisdiction.

If a park, recreation land, or open space meets these criteria, the entire property – including parking, maintenance facilities, and recreational facilities – must be considered as part of the resource. The following methods and tools were used to identify publicly-owned public parks and recreation areas within the project study corridor identified in the FEIS: review of GIS layers; review of the Baltimore City View mapping tool; visual observation; property records search; and consultation with the Baltimore County Department of Recreation and Parks, the Baltimore City Department of Recreation and Parks, and the Maryland Department of Natural Resources (DNR). Correspondence with these agencies is presented in **Appendix J, Attachment 2**.

Of the 11 parks and recreational areas within the project study corridor identified in **Appendix J, Attachment 1**, a total of five would be impacted by the Preferred Alternative. A brief description of each park that would be impacted by the Preferred Alternative is presented in **Table 6-2**.

Table 6-2: Parks and Recreational Areas within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Park Area	Ownership	Description/Activities	Type of use by the Red Line Project
Uplands Park Located in the Uplands/Ten Hills neighborhoods of Baltimore City, on the south side of Edmondson Avenue between Nottingham Road and Uplands Parkway	33.62 acres	Baltimore City Department of Recreation and Parks	Forested area, passive recreation	0.1 acre temporary occupancy for to maintain traffic along Edmondson Avenue during construction for a duration of approximately 30 months

Table 6-2: Parks and Recreational Areas within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Park Area	Ownership	Description/Activities	Type of use by the Red Line Project
Boston Street Pier Park Located in the Canton neighborhood of Baltimore City on the south side of Boston Street at South Lakewood Avenue	0.75 acre	Baltimore City Department of Recreation and Parks	Multi-use paths and a pedestrian bridge/fishing pier connecting to the Baltimore Waterfront Promenade	0.06 acre construction easement during construction along Boston Street for 6-12 months; 0.06 acre permanent use to accommodate plant cells for stormwater management
St. Casimir's Park Located in the Canton neighborhood of Baltimore City on the north side of Boston Street between South Lakewood and South Kenwood Avenues	1.4 acres	Baltimore City Department of Recreation and Parks	Open space, walking paths, and benches	0.09 acre construction easement during construction along Boston Street for 6-12 months; 0.07 acre permanent use to relocate a storm drain and to accommodate sidewalk shift along Boston Street
Canton Waterfront Park Located in the Canton neighborhood of Baltimore City on the south side of Boston Street between South Linwood Avenue and South Clinton Streets	7.0 acres	Baltimore City Department of Recreation and Parks	Korean War Memorial, water taxi landing, fishing and crabbing access, pedestrian and bicycle access, and a segment of the Baltimore Waterfront Promenade	0.1 acre temporary occupancy during civil work on Boston Street; work would be intermittent during a 6-12 month period
Du Burns Arena (also known as Canton Park) Located in the Canton neighborhood of Baltimore City on the north side of Boston Street at the intersection with Ellwood Avenue	2.5 acres	Baltimore City Department of Recreation and Parks	Hosts the Baltimore Blast soccer team, club sports, and sporting events such as roller derby and boxing matches	0.02 acre temporary occupancy during civil work on Boston Street; work would be intermittent during a 6-12 month period

Gwynns Falls/Leakin Park is a 1,200 acre publicly-owned public park operated by Baltimore City Department of Recreation and Parks. It includes contiguous parkland and woodlands from the western boundary of Baltimore City, following the Gwynns Falls from Windsor Mill Road to Wilkens Avenue. Activities include recreational trails, picnic areas, and miniature steam trains in use from April through October.

Under the Preferred Alternative, the Red Line would cross the Edmondson Avenue Bridge over Gwynns Falls/Leakin Park (**Figure 6-1**). Baltimore City is currently undertaking a project to

improve and widen the Edmondson Avenue Bridge. The impacts to Gwynns Falls/Leakin Park as a result of these bridge improvements and/or widening are being evaluated by Baltimore City as part of the Edmondson Avenue Bridge project. Construction of the Edmondson Avenue Bridge improvements would be completed prior to the construction of the Red Line. No impacts to the park are anticipated as a result of the Preferred Alternative. Therefore, because construction of the Preferred Alternative would not result in direct impacts to Gwynns Falls/Leakin Park, Section 4(f) would not apply.

6.5.2 Historic Sites

Historic sites were identified, in accordance with the Section 106 process of the National Historic Preservation Act, as amended (refer to FEIS **Chapter 5.9**). The applicability of Section 4(f) to historic sites is cited at 23 CFR Part 774.11(e), and the definition of a historic site is at 774.17. For the purposes of Section 4(f), a historic site is any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register, which is the equivalent of a historic property under Section 106.

Eligibility for the National Register is evaluated based on four criteria. It is customary to identify the applicable National Register criteria when describing a historic site in a Section 4(f) evaluation. Identifying these criteria provides a starting point for understanding the significant features, activities, or attributes of the site. The criteria are:

- *Criterion A:* association with events that have made a significant contribution to the broad patterns of our history;
- *Criterion B:* association with the lives of significant persons in our past;
- *Criterion C:* embodiment of the distinctive characteristics of a type, period, or method of construction, or representative of the work of a master, or that possess high artistic values, or representative of a significant and distinguishable entity whose components may lack individual distinction; and
- *Criterion D:* have yielded or may be likely to yield, information important in history or prehistory.

In addition to having significance, the property must also possess historic integrity, based on these seven aspects: location, design, setting, materials, workmanship, feeling, and association. They are used to assess the nature and degree of changes that may have occurred since the period of historic significance. To retain historic integrity, a property would always possess several, and usually most, of the aspects.

Certain kinds of properties are not usually considered for the National Register: religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. These properties can be eligible for listing, however, if they meet special requirements called Criteria Considerations, in addition to meeting one or more of the criteria listed above, and possessing integrity. Criteria Consideration A applies to religious properties. A religious property is eligible if it derives its primary significance from architectural or artistic distinction or historical importance.

Properties and districts not previously listed in or determined eligible for the National Register, and that would be more than 50 years old at the end of the project planning process (built in and prior to 1963), were evaluated using MHT National Register evaluation forms. Determination of Eligibility (DOE) Forms included descriptions, historic contexts, evaluations applying the four National Register criteria (and Criteria Considerations, when applicable), and integrity assessments (for properties and districts with significance). For individual properties that were clearly ineligible for the National Register, a Short Form for Ineligible Properties was utilized. A total of 78 historic sites were identified for this project (**Appendix J, Attachment 1**).

When a project uses land from an individually National Register-listed or eligible property, and/or a property that is a contributing element to a listed or eligible historic district, Section 4(f) is applicable. There are 11 historic sites with land that would be used by this project. A brief description of each of these historic sites is presented in **Table 6-3**.

Table 6-3: Historic Sites within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Maryland Inventory of Historic Properties Number	National Register of Historic Places Status	Eligibility Criteria	Type of Use by the Red Line Project
St. William of York Catholic Church and School (built in: church 1914; school and smaller wing of school ca. late 1940s; rest of school 1951) 600 Cooks Lane	B-5100	Eligible	C, Criteria Consideration A	Minor property acquisition
St. Bartholomew's Episcopal Church (built in: church 1931-32; parish hall earlier) 4711 Edmondson Avenue	B-5105	Eligible	C, Criteria Consideration A	Temporary easement with approximately 30 month duration
Enoch Pratt Free Library, Edmondson Avenue Branch (built in 1952) 4330 Edmondson Avenue	B-1384	Eligible	A, C	Minor property acquisition
¹ Edmondson Village Historic District: Contributing Buildings (built between ca. 1911 to 1938) Edmondson Avenue to south, Walnut Avenue and North Woodington Road to west, North Hilton Street to east, and on north by Gelston Drive	B-5109	Eligible	A, C	Sliver takes from multiple properties facing Edmondson Avenue

Table 6-3: Historic Sites within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Maryland Inventory of Historic Properties Number	National Register of Historic Places Status	Eligibility Criteria	Type of Use by the Red Line Project
¹ Allendale-West Mulberry Historic District: Contributing Buildings (built between 1910s to mid-1930s) Bounded by Edmondson Avenue, Wildwood Parkway, New Cathedral Cemetery, West Mulberry Street, Gwynn Avenue, North Monastery Avenue, West Caton Avenue, North Culver Street, and North Hilton Street	B-5111	Eligible	A, C	Sliver takes from multiple properties facing Edmondson Avenue
¹ Keelty Daylight Rowhouse Historic District at Gwynns Falls: Contributing Buildings (built between 1910s to 1930s) Two sections located on west and east sides of Gwynns Falls Park: (1) west section bordered by Normandy Avenue, Lyndhurst Street, Gelston Drive, North Hilton Street, West Mulberry Street, Edgewood Street, West Lexington Street, North Grantley Street, West Saratoga Street, and Allendale Street and (2) east section bordered by Gwynns Falls Trail, Ellicott Driveway, Braddish Avenue, West Lafayette Avenue, Poplar Grove Street, and Edmondson Avenue	B-1378	Eligible	A, C	Sliver takes from multiple properties facing Edmondson Avenue
¹ Greater Rosemont Historic District (built between ca. 1890 to 1950s) Bounded by West Franklin Street, North Franklinton Road, Poplar Grove Street, Edmondson Avenue, Gwynns Falls Park, North Rosedale Street, Ellicott Driveway, Ashburn Street, Prospect Street, Braddish Avenue, West Lafayette Avenue, West Lanvale Street, North Dukeland Street, Rayner Avenue, Whitmore Avenue, Winchester Street, North Bentalou Street, CSX tracks, Riggs Avenue, and the Amtrak Northeast Corridor (historically the Baltimore & Potomac Railroad)	B-5112	Eligible	A, C	Sliver takes from multiple properties facing Edmondson Avenue and West Franklin Street

Table 6-3: Historic Sites within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Maryland Inventory of Historic Properties Number	National Register of Historic Places Status	Eligibility Criteria	Type of Use by the Red Line Project
<p>¹Edmondson Avenue Historic District (built between early to mid-twentieth century) Bounded by West Franklin Street, North Franklinton Road, Edmondson Avenue, Evergreen Street, Rayner Avenue, Braddish Avenue, St. Peters Cemetery, North Bentalou Street, CSX tracks, Riggs Avenue, West Lafayette Avenue, and Spedden Street</p>	B-5187	Listed	A, C	Sliver takes from multiple properties facing West Franklin Street
<p>² Baltimore & Potomac Railroad (Philadelphia, Baltimore & Washington Railroad): Contributing Railroad Bridges (west segment) (established 1872; tunnel [1872]; most other structures and buildings from early part of twentieth century) Between Baltimore City/Baltimore County line (in community of Violetville) at southwest to Baltimore's Pennsylvania Station at northeast (excluding station itself)</p>	B-5164	Eligible	A,C	Catenaries attached to undersides of two contributing railroad bridges
<p>Business and Government Historic District: Contributing Buildings (built primarily ca. 1900 to 1925; some earlier and later) Bounded by South and North Charles Street, East Lexington Street, East Saratoga Street, North and South Gay Street, North Frederick Street, East Baltimore Street, West Falls Avenue, Water Street, and East Lombard Street</p>	B-3935	Listed	A, C	Two district contributing buildings to be demolished

Table 6-3: Historic Sites within the Project Study Corridor that would be used by the Red Line Project

Resource (See Figure 6-1)	Maryland Inventory of Historic Properties Number	National Register of Historic Places Status	Eligibility Criteria	Type of Use by the Red Line Project
<p>Union Railroad: Contributing Bridge over Eastern Avenue Underpass (railroad established ca. 1873; bridge overpasses date to post-1930) The entire length of the line in Baltimore City from the northern portal of the Baltimore & Potomac Tunnel under the Northern Avenue Bridge to the southern terminus at Boston Street in Canton</p>	B-5163	Eligible	A	Repair work on a contributing railroad bridge

Notes: ¹ The boundaries for the five historic districts overlap, as illustrated in **Figure 6-1**.

² This historic site also consists of a separate contributing east segment running northeast from O'Donnell Street (near South Haven Street) to the Bayview Railyard. However, this portion has no Section 4(f) use.

6.6 Temporary Occupancy

6.6.1 Temporary Occupancy of Publicly-Owned Public Parks and Recreational Areas

Three publicly-owned public parks and recreational areas would incur temporary impacts from the construction of the Preferred Alternative: Upland Park, Canton Waterfront Park, and Du Burns Arena. For these properties, FTA intends to make a determination that the temporary occupancy meets the criteria in 23 CFR 774.13(d), and therefore, the temporary occupancy does not constitute a temporary use.

As per Section 4(f) regulations, an evaluation of avoidance alternatives and an analysis of least overall harm are not required for these properties, and therefore have not been developed in this Draft Section 4(f) Evaluation. If concurrence is obtained from the official with jurisdiction over these resources, a final determination will be made by FTA in the Final Section 4(f) determination.

a. Uplands Park

Uplands Park is located on the south side of Edmondson Avenue between Nottingham Road and Uplands Parkway, directly east of the proposed Cooks Lane tunnel portal as the Preferred Alternative transitions from the tunnel segment to the surface in the median of Edmondson Avenue (**Figure 6-11**). The tunnel portal would be constructed within the roadway median from east of Brookwood Road to east of Glen Allen Drive, including the subsurface to above ground transition area. The completed above ground portion of the portal, including walls and fencing, would begin east of Winans Way/Uplands Parkway and continue to east of Glen Allen Drive.

Construction of the tunnel portal would require maintenance and protection of traffic and pedestrian access within the area. As such, a temporary easement of 0.09 acre would be required from Uplands Park to accommodate two eastbound lanes of traffic on the south side of Edmondson Avenue, as well as a temporary sidewalk to provide pedestrian access during construction of the tunnel portal (**Figure 6-11**). The temporary pedestrian sidewalk would be located along the perimeter of the park facing Edmondson Avenue. Construction activities would also include vegetation removal, temporary fill, and temporary erosion and sediment control measures within the easement footprint. The duration of construction would be approximately 30 months. Following construction, the temporary pedestrian sidewalk, fill, and erosion and sediment control measures would be removed. The site would be restored to original grade, vegetation would be replanted, and trees would be replaced at a 1:1 diameter at breast height (DBH) ratio.

b. Canton Waterfront Park

Canton Waterfront Park is located on the south side of Boston Street between South Linwood Avenue and South Clinton Streets. During construction of the Preferred Alternative's alignment along Boston Street, a temporary easement of 0.1 acre would be needed from this park property for curb and sidewalk reconstruction and mill and overlay work (**Figure 6-12**). Construction activities would occur within the approximate 6 to 12 month duration of all civil work that would be conducted on Boston Street.

Canton Waterfront Park includes a parking lot with vehicle entrances at South Ellwood and South East Avenues. Intersection work proposed on Boston Street would create temporary impacts, prohibiting left turn movements to and from the parking lot entrances during construction. Work at each intersection would last approximately 2 weeks, and would be staggered so that only one entrance is impacted at a time. Vehicle entrances would maintain right-in, right-out access during the closure of left movements. Boat trailer access to Canton Waterfront Park would be maintained during and after construction.

c. Du Burns Arena

Du Burns Arena (also known as Canton Park) is on the north side of Boston Street at the intersection with Ellwood Avenue. During construction of the Preferred Alternative, a temporary easement of 0.02 acre would be needed from this property to construct tie-ins to existing sidewalks (**Figure 6-12**). Construction activities would occur within the 6 to 12 month duration of all construction work that would be conducted on Boston Street.

6.6.2 Temporary Occupancy of Historic Sites

One historic site, St. Bartholomew's Episcopal Church, would incur a temporary impact from the construction of the Preferred Alternative. For this property, FTA intends to make a determination that the temporary occupancy meets the criteria in 23 CFR 774.13(d), and therefore, the temporary occupancy does not constitute a temporary use. If concurrence is obtained from the official with jurisdiction over these resources, a final determination will be made by FTA in the Final Section 4(f) Evaluation.

As per Section 4(f) regulations, an evaluation of avoidance alternatives and an analysis of least overall harm are not required for this property, and therefore have not been developed in this Draft Section 4(f) Evaluation.

a. St. Bartholomew's Episcopal Church

St. Bartholomew's Episcopal Church is an ecclesiastical historic site on the south side of Edmondson Avenue between Nottingham Road and Uplands Parkway (**Figure 6-11**). Under the Preferred Alternative, the nearby section of the transitway would be located to the north of the historic site, below the center of Edmondson Avenue. A tunnel portal transition of the tracks from underground to the surface would begin in front of the church. The portal would be constructed within the roadway median from east of Brookwood Road to east of Glen Allen Drive, including the subsurface to above ground transition area. The completed above ground portion of the portal, including walls and fencing, would begin east of Winans Way/Uplands Parkway and continue to east of Glen Allen Drive.

A temporary easement of 0.09 acre would be required from the 2.58 acre church property to accommodate two eastbound lanes of traffic on the south side of Edmondson Avenue and a temporary sidewalk to maintain pedestrian access during construction of the tunnel portal (**Figure 6-11**). The duration of construction would be approximately 30 months. Following construction, the area of impact would be restored to pre-construction conditions.



**St. Bartholomew's
Episcopal Church:
0.09 AC temporary**

**Uplands Park:
0.1 AC temporary**

Portal Limits

LEGEND:

	Limit of Disturbance
	Historic Properties
	Section 4(f) Parks and Recreational Properties

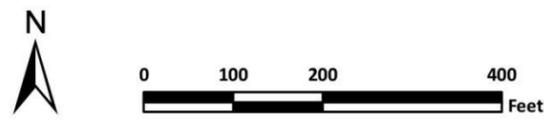


Figure 6-11: Uplands Park and St. Bartholomew's Episcopal Church



**Canton Waterfront Park:
0.1 AC temporary**

**Du Burns Arena:
0.02 AC temporary**

LEGEND:

- Limit of Disturbance
- Section 4(f) Parks and Recreational Properties



Figure 6-12: Canton Waterfront Park and Du Burns Arena

6.7 Use of Section 4(f) Resources

6.7.1 Documentation of De Minimis Impacts to Publicly-Owned Public Parks and Recreational Areas

Two publicly-owned public parks and recreational areas would incur only minor impacts from the Preferred Alternative: Boston Street Pier Park and St. Casimir's Park.

Following the FEIS/Draft Section 4(f) Evaluation public and agency comment period, the FTA intends to make a de minimis impact finding. As such, FTA and MTA have notified the official with jurisdiction, Baltimore City Recreation and Parks that they intend to seek written concurrence, pursuant to 23 CFR 774.3(b), that the impacts would not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. Should the official with jurisdiction concur, the FTA would then issue a finding of de minimis impact on an individual property basis, which would be presented in the Final Section 4(f) Evaluation. If the official with jurisdiction does not concur, a revised Draft Section 4(f) Evaluation would be prepared and would include an evaluation of avoidance alternatives and an analysis of least overall harm.

a. Boston Street Pier Park

Boston Street Pier Park is located on the south side of Boston Street at South Lakewood Avenue (**Figure 6-13**). Under the Preferred Alternative, the transitway would operate in the roadway median on Boston Street. During construction, a temporary easement of 0.06 acre would be needed from the park property for grading, sidewalk reconstruction, and erosion and sediment control along Boston Street. Civil work on Boston Street, such as utility relocation and sidewalk work, would last approximately 6 to 12 months, and temporary impacts to park properties would be intermittent throughout that anticipated timeframe.

In addition to temporary construction easements, a fee simple area of 0.06 acre would be required from this park to accommodate stormwater management for the Red Line project. In order to avoid additional grading and minimize disturbance to the park, planter cells would be used to treat stormwater. Each planter cell (shown below) would be approximately 5 feet in width, and cells would be placed behind the sidewalk along the perimeter of the park along Boston Street. An example of a similar type stormwater management planter cell is presented below. Refer to **Figure 6-13** for the limits of impacts within Boston Street Pier Park.



Example of a Stormwater Management Planter Cell

b. St. Casimir's Park

St. Casimir's Park is on the north side of Boston Street between South Lakewood and South Kenwood Avenues (**Figure 6-13**). During construction of the Preferred Alternative, a temporary easement of 0.09 acre would be required from this park property for curb and sidewalk reconstruction, and mill and overlay work. Civil work on Boston Street, such as utility relocation and sidewalk work, would last approximately 6 to 12 months, and temporary impacts to park properties would be intermittent throughout that anticipated timeframe.

A fee simple area of 0.07 acre along the perimeter of the park facing Boston Street would be required to permanently relocate and maintain a storm drain near the median of Boston Street where the Preferred Alternative transitway would be located. Additionally, the fee simple area would accommodate a portion of the sidewalk, which would also be shifted, to accommodate the transitway (refer to **Figure 6-13**).

6.7.2 Documentation of De Minimis Impacts to Historic Sites

Nine historic sites with Section 4(f) uses evaluated in this Draft Section 4(f) Evaluation would incur minor impacts from the Preferred Alternative.

Following the FEIS/Draft Section 4(f) Evaluation public and agency comment period and review of the Section 106 Assessment of Effects for Built Historic Properties, the FTA intends to make a de minimis impact finding. As such, FTA and MTA have notified the official with jurisdiction, MHT, that they intend to seek written concurrence, pursuant to 23 CFR 774.3(b), and would not incur an "adverse effect" pursuant to 36 CFR Part 800.5(b). Should the official with jurisdiction concur, the FTA would then issue a finding of de minimis impact on an individual property basis, which would be presented in the Final Section 4(f) Evaluation. If the official with jurisdiction does not concur, a revised Draft Section 4(f) Evaluation would be prepared and would include an evaluation of avoidance alternatives and an analysis of least overall harm.

a. St. William of York Catholic Church and School

St. William of York Catholic Church and School is an ecclesiastical historic site located at the northwest corner of Edmondson Avenue and Cooks Lane (**Figure 6-14**). Under the Preferred Alternative, the nearby alignment would be underground, northeast of the historic site's boundary, following Cooks Lane and turning east to follow Edmondson Avenue. A tunnel portal would transition the tracks from underground to the surface further east along Edmondson Avenue. The portal would be constructed within the roadway median from east of Brookwood Road to east of Glen Allen Drive, including the subsurface to above ground transition area. The completed above ground portion of the portal, including walls and fencing, would begin east of Winans Way/Uplands Parkway and continue to east of Glen Allen Drive.

The project would result in a Section 4(f) use of this church and school because of sidewalk replacements required for the Preferred Alternative along the property's southeastern historic site boundary. The work would extend up to 20 feet into the property, which is approximately 0.2 acre of its 1.95 acres (**Figure 6-14**).

b. Enoch Pratt Free Library, Edmondson Avenue Branch

The Enoch Pratt Free Library, Edmondson Avenue Branch is a library and historic site located at the northeast corner of Edmondson Avenue and North Athol Avenue (**Figure 6-15**). Under the Preferred Alternative, the nearby section of the transitway would have two sets of tracks on Edmondson Avenue, running about 40 feet directly south of the library's boundary.

The project would result in a Section 4(f) use of this property because a small corner of the library's historic site boundary is within the project's limits of disturbance. Sidewalk replacements are anticipated for this approximately 261 square feet (0.006 acre) area within the 0.28 acre library boundary (**Figure 6-15**).

c. Edmondson Village Historic District

The Edmondson Village Historic District is a primarily residential rowhouse district between Edmondson Avenue to the south, Walnut Avenue and North Woodington Road to the west, North Hilton Street to the east, and on the north by Gelston Drive (**Figure 6-16**). A total of 60 contributing properties would be impacted within the Edmondson Village Historic District. Of those, 48 properties are also contributing properties to the overlapping Keelty Daylight Rowhouse Historic District at Gwynns Falls (refer to **Section 6.7.2.e** below).

Under the Preferred Alternative, the transitway near the district would have two sets of tracks on Edmondson Avenue, about 25 feet directly south of the district's boundary; the westbound and eastbound Allendale Station platforms would be on Edmondson Avenue at Allendale Street.

The project would result in a Section 4(f) use of 60 properties on the north side of Edmondson Avenue because land from the following National Register-eligible historic district contributing properties would be required: (a) four rowhouse properties and eight duplex properties between Wildwood Parkway and North Loudon Avenue; (b) 28 rowhouse properties and one church property between Mount Holly and Linnard Streets; and (c) 19 rowhouse properties between Edgewood and Denison Streets. These properties are on five of the 11 ½ blocks of the historic district that face south onto Edmondson Avenue.

The acquisitions are in the property front yards, involving contributing features such as terraces; lawns; concrete pavement, steps linking to the sidewalks, walkways, and curbs bordering the yards; and low rubble stone walls. Individual property acquisitions range from about 2 feet to 8 feet of the front yards. Called sliver takes, these partial acquisitions are narrow strips of the properties located directly adjacent to the proposed project; most of each property would remain with the current owner and the acquisitions would not affect the use of the properties. Refer to the photo for an example of proposed right-of-way within Edmondson Village Historic District. In all instances, the majority of the existing yards, including terraces, would be retained. In addition, the total property acquisitions of about 0.01 acre are a small part of the 89 acres of the historic district, representing about 0.01 percent of its size (**Figure 6-16**).

No buildings would be altered or demolished, and the character of the district would be maintained.



Example of proposed right-of-way within Edmondson Village Historic District

d. Allendale-West Mulberry Historic District

The Allendale-West Mulberry Historic District is a primarily residential rowhouse district and historic site bounded by Edmondson Avenue, Wildwood Parkway, New Cathedral Cemetery, West Mulberry Street, Gwynn Avenue, North Monastery Avenue, West Caton Avenue, North Culver Street, and North Hilton Street (**Figure 6-17**). A total of 102 contributing properties would be impacted within the Allendale-West Mulberry Historic District. Of those, 79 properties are also contributing properties to the overlapping Keelty Daylight Rowhouse Historic District at Gwynns Falls (refer to **Section 6.7.2.e**).

Under the Preferred Alternative, the transitway near the district would consist of two sets of tracks along Edmondson Avenue, about 20 feet directly north of the district's boundary; the westbound and eastbound Allendale Station platforms would be on Edmondson Avenue at Allendale Street.

The project would result in a Section 4(f) use of 102 properties on the south side of Edmondson Avenue because land from the following National Register-eligible historic district contributing properties would be required: (a) 88 rowhouse properties and one office property between Wildwood Parkway and Edgewood Street and (b) 13 rowhouse properties between Denison and North Hilton Streets. These properties are on eight of the nine blocks of the historic district that face north onto Edmondson Avenue.

The acquisitions are in the property front yards (with the exception of one side yard), involving contributing features such as terraces; lawns; concrete pavement, steps linking to the sidewalks, walkways, and curbs bordering the yards; and low rubble stone walls. Individual property acquisitions range from about 1 foot to 9 feet of the front yards within these sliver takes. In all instances, the majority of the existing yards, including terraces, would be retained. In addition, the total property acquisitions of about 0.3 acre are a small part of the 79 acres of the historic district, representing about 0.38 percent of its size (refer to **Figure 6-17**). Refer to

the photo for an example of proposed right-of-way within Allendale-West Mulberry Historic District/Keilty Daylight Rowhouse Historic District at Gwynns Falls.

No buildings would be altered or demolished, and the character of this district would be maintained.



Example of proposed right-of-way within Allendale-West Mulberry Historic District/Keilty Daylight Rowhouse Historic District at Gwynns Falls

e. Keilty Daylight Rowhouse Historic District at Gwynns Falls

The Keilty Daylight Rowhouse Historic District at Gwynns Falls is a residential rowhouse district and historic site, located on the west and east sides of Gwynns Falls Park. The west section is bordered by Normandy Avenue, Lyndhurst Street, Gelston Drive, North Hilton Street, West Mulberry Street, Edgewood Street, West Lexington Street, North Grantley Street, West Saratoga Street, and Allendale Street and the east section is bordered by Gwynns Falls Trail, Ellicott Driveway, Braddish Avenue, West Lafayette Avenue, Poplar Grove Street, and Edmondson Avenue (**Figure 6-18**). A total of 152 contributing properties would be impacted within the Keilty Daylight Rowhouse Historic District at Gwynns Falls. Of the total, 48 properties are also contributing properties to the overlapping Edmondson Village Historic District (refer to **Section 6.7.2.c**), 79 are also contributing properties to the Allendale-West Mulberry Historic District (refer to **Section 6.7.2.d**), and 25 are also contributing properties to the Greater Rosemont Historic District (refer to **Section 6.7.2.f**).

Under the Preferred Alternative, the transitway in the west section of the district would consist of two sets of tracks along Edmondson Avenue within the district; in the east section the tracks would run along Edmondson Avenue, about 25 feet south of the district's boundary. The westbound and eastbound Allendale Station platforms would be on Edmondson Avenue at Allendale Street.

The project would result in a Section 4(f) use of 152 properties on the north and south sides of Edmondson Avenue because land from the following National Register-eligible historic district contributing properties would be required:

- North Side: (a) 28 rowhouse properties and one church property between Mount Holly and Linnard Streets; (b) 19 rowhouse properties between Edgewood and Denison Streets; and (c) 25 rowhouse properties between North Rosedale and North Longwood Streets.
- South Side: (a) 65 rowhouse properties and one office property between Normandy Avenue and Edgewood Street and (b) 13 rowhouse properties between Denison and North Hilton Streets.

These properties are on 11 of the 16 blocks of the historic district that face onto Edmondson Avenue.

The land acquisitions are in the property front yards (with the exception of one side yard), involving contributing features such as terraces; lawns; concrete pavement, steps linking to the sidewalks, walkways, curbs bordering the yards, and driveway; and low rubble stone walls. Individual property acquisitions range from about 1 foot to 9 feet of the front yards within these sliver takes. In all instances, the majority of the existing yards, including terraces, would be retained. In addition, the total property acquisitions of about 0.33 acre are a small part of the 235 acres of the historic district, representing about 0.14 percent of its size (**Figure 6-18**).

No buildings would be altered or demolished, and the character of the district would be maintained.

f. Greater Rosemont Historic District

The Greater Rosemont Historic District is a primarily residential rowhouse district and historic site bounded by West Franklin Street, North Franklinton Road, Poplar Grove Street, Edmondson Avenue, Gwynns Falls Park, North Rosedale Street, Ellicott Driveway, Ashburn Street, Prospect Street, Braddish Avenue, West Lafayette Avenue, West Lanvale Street, North Dukeland Street, Rayner Avenue, Whitmore Avenue, Winchester Street, North Bentalou Street, CSX tracks, Riggs Avenue, and the Amtrak Northeast Corridor (historically the Baltimore & Potomac Railroad) (**Figure 6-19**). A total of 40 contributing properties would be impacted within the Greater Rosemont Historic District. Of those, 25 properties are also contributing properties to the overlapping Keelty Daylight Rowhouse Historic District at Gwynns Falls (refer to **Section 6.7.2.e**), and 15 properties are also contributing properties to the overlapping Edmondson Avenue Historic District (refer to **Section 6.7.2.g**).

Under the Preferred Alternative, the transitway near the district would consist of two sets of tracks along Edmondson Avenue, and continue east along North Franklinton Road and West Franklin Street. The alignment would be about 30 to 60 feet south of the district's boundary; the Rosemont Station platforms would be on Edmondson Avenue, between Poplar Grove Street and North Franklinton Road, before the alignment turns onto North Franklinton Road. At the eastern end of the historic district, the alignment splits into two, with the west bound trains

along West Franklin Street, and the east bound trains along West Mulberry Street; the two station platforms for each are east of the existing Amtrak Northeast Corridor alignment.

The project would result in a Section 4(f) use of 40 properties on the north side of Edmondson Avenue and Franklin Street because land from the following National Register-eligible historic district contributing properties would be required: a) 25 rowhouse properties between North Rosedale and North Longwood Streets and b) 15 rowhouse properties between Whitmore and North Warwick Avenues. These properties are located on two out of the thirteen blocks of the historic district that face south onto Edmondson Avenue, North Franklinton Road, and West Franklin Street.

The acquisitions are in the property front yards (with the exception of one side yard), involving contributing features such as terraces; lawns; and concrete steps linking to the sidewalks, curbs bordering the yards, and driveway. Individual property acquisitions range from about 0.5 foot to 1 foot of the front yards within these sliver takes. In all instances, the majority of the existing yards, including terraces, would be retained. In addition, the total property acquisitions of about 0.01 acre are a small part of the 270 acres of the historic district, representing about 0.004 percent of its size (**Figure 6-19**).

No buildings would be altered or demolished, and the character of this district would be maintained.

g. Edmondson Avenue Historic District

The Edmondson Avenue Historic District is a primarily residential rowhouse district and historic site bounded by West Franklin Street, North Franklinton Road, Edmondson Avenue, Evergreen Street, Rayner Avenue, Braddish Avenue, St. Peters Cemetery, North Bentalou Street, CSX tracks, Riggs Avenue, West Lafayette Avenue, and Spedden Street (**Figure 6-20**).

A total of 15 contributing properties would be impacted within the Edmondson Avenue Historic District. Of those, all are also contributing properties to the overlapping Greater Rosemont Historic District (refer to **Section 6.7.2.f**).

Under the Preferred Alternative, the transitway near the district would consist of two sets of tracks along North Franklinton Road, continuing east along West Franklin Street. The alignment would be about 30 to 60 feet south of the district's boundary; the Rosemont Station platforms would be located on Edmondson Avenue, between Poplar Grove Street and North Franklinton Road, west of the western end of the historic district. At the eastern end of the historic district, the alignment splits into two, with the west bound trains along West Franklin Street, and the east bound trains along West Mulberry Street; the two station platforms for each are east of the existing Amtrak Northeast Corridor alignment.

The project would result in a Section 4(f) use of 15 properties because land from these National Register-eligible historic district contributing properties would be required on the north side of Franklin Street between Whitmore and North Warwick Avenues. These properties are on one of the seven blocks of the historic district that face south onto North Franklinton Road and West Franklin Street.

The acquisitions are in the property front yards and involve contributing features such as concrete steps linking to the sidewalks and concrete curbs bordering the yards. Individual property acquisitions average 0.5 foot of the front yards within these sliver takes. In all instances, the majority of the existing yards would be retained. In addition, the total property acquisitions of about 70 square feet are a very small part of the 167 acres of the historic district, representing about 0.001 percent of its size (**Figure 6-20**).

No buildings would be altered or demolished, and the character of this district would be maintained.

h. Baltimore & Potomac Railroad (Philadelphia, Baltimore & Washington Railroad)

The Baltimore & Potomac Railroad (Philadelphia, Baltimore & Washington Railroad) is a railroad corridor and historic site. It is between the Baltimore City/Baltimore County line at the southwest (in the community of Violetville) to Baltimore's Pennsylvania Station at the northeast (excluding the station itself) (**Figure 6-21**). Today, the alignment is part of Amtrak's Northeast Corridor; the MARC commuter trains and Norfolk Southern (NS) freight trains also use this railroad corridor.

Under the Preferred Alternative, the transitway's eastbound and westbound tracks would diverge and follow West Franklin and West Mulberry streets at grade. The elevated Baltimore & Potomac Railroad, including the West Baltimore MARC Station, is carried above these streets by two railroad bridges that are contributing elements of the historic alignment. The project would result in a Section 4(f) use of the bridges because overhead catenary lines would be attached to their undersides (**Figure 6-21**).

i. Union Railroad

The Union Railroad is a railroad alignment and historic site. It consists of the entire length of the line in Baltimore City that extends from the northern portal of the Baltimore & Potomac Tunnel under the Northern Avenue Bridge to the southern terminus at Boston Street in Canton (**Figure 6-22**). The portion of the railroad corridor with Section 4(f) use has been inactive since the 1980s, and is owned by NS.

The Preferred Alternative would run on rail lines from approximately Fait Avenue to East Platt Street. All existing rail line features such as the tracks, ties, and ballast along this section of railroad would be replaced. The new topography would be built-up and the new dual track alignment shifted as compared to the existing rail lines. The proposed Greentown/Highlandtown Station would consist of two platforms, each approximately 195 feet long and 10 feet wide with a partial canopy. They would flank the new Red Line tracks on either side, and be located between Fleet Street and Eastern Avenue. Construction staging areas would encompass portions of the railroad's alignment (**Figure 6-22**). At least some of the existing rails have 1920s date stamps, and could have been installed at their current location at that time. However, the integrity of the rail line features is impacted significantly by longtime inactivity and the growth of dense vegetation. The results of disuse include deteriorated railroad ties and ballast, and removed or covered over tracks.

Under the Preferred Alternative, the project would result in a Section 4(f) use of the Union Railroad because the alignment would travel across a railroad bridge (over Eastern Avenue) that is a contributing element of the historic railroad. The bridge's steel plates would be spot repaired, involving grinding off rusted areas and welding on new plates. The current concrete deck would be replaced in kind, although this would not be visible, except from underneath the bridge. The bridge would be painted. It would maintain its current historic appearance.

6.8 Documentation of Permanent Use of a Historic District Requiring Avoidance Alternatives and Least Overall Harm Analysis

The proposed Inner Harbor Station has the potential to result in a permanent, non-de minimis use of land within the Business and Government Historic District, as a result of the proposed demolition of two historic resources that would be required for the construction of the station ancillary building. The proposed Inner Harbor Station and ancillary building was discussed in **Section 6.4.5** of this Draft Section 4(f) Evaluation.

The Business and Government Historic District is a commercial and government district, and historic site bounded by South and North Charles Street, East Lexington Street, East Saratoga Street, North and South Gay Street, North Frederick Street, East Baltimore Street, West Falls Avenue, Water Street, and East Lombard Street (**Figure 6-23**).

Within the historic district is 108-12 East Lombard Street, a three-story brick building constructed in the Colonial Revival style in 1904 that is vacant. The building played a role in Baltimore City's economic, commercial, and physical growth during the period of significance. It is one of the many early twentieth century low-scale buildings with classical details built during the years after Baltimore's Great Fire of 1904. The building retains enough integrity to be a contributing resource to the district. It retains its original location. Although a good number of the surrounding buildings have been replaced with larger scale commercial buildings, nearby buildings are still those from the historic district's period of significance. In addition, the area is still Baltimore City's active business and government district. The doors are boarded and the window sashes are either replaced or boarded, but otherwise the building retains most of its character-defining features, including Colonial Revival design details such as a wood cornice with a corbel table and egg-and-dart details, wood shutters flanking the windows, wood fanlight above a second floor window, and a wood round-arched primary entrance with keystone, topped by a broken pediment supported by Doric columns.

Adjacent to the 108-112 three-story brick building, is 114 East Lombard Street, a four-story brick building constructed in the Italianate style in 1906 that is also vacant (see photo). The property's association with the Business and Government Historic District's significance is identical to 108-12 East Lombard Street. This building retains enough integrity to be a contributing resource to the district. It retains its original location. Although a good number of the surrounding buildings have been replaced with larger-scale commercial buildings, nearby buildings are still those from the historic district's period of significance. In addition, the area is still Baltimore's active business and government district. The doors are boarded and the window sashes are either replaced or boarded, but otherwise it retains its character-defining

features such as a prominent wood cornice with brackets and dentils, and rusticated rock-faced stone sills and string courses.

The Preferred Alternative proposes a configuration for the Inner Harbor Station that would result in a Section 4(f) use of both 108-12 and 114 East Lombard Street because these buildings would be acquired and demolished to accommodate the station ancillary building that would contain ventilation, smoke control and equipment rooms.

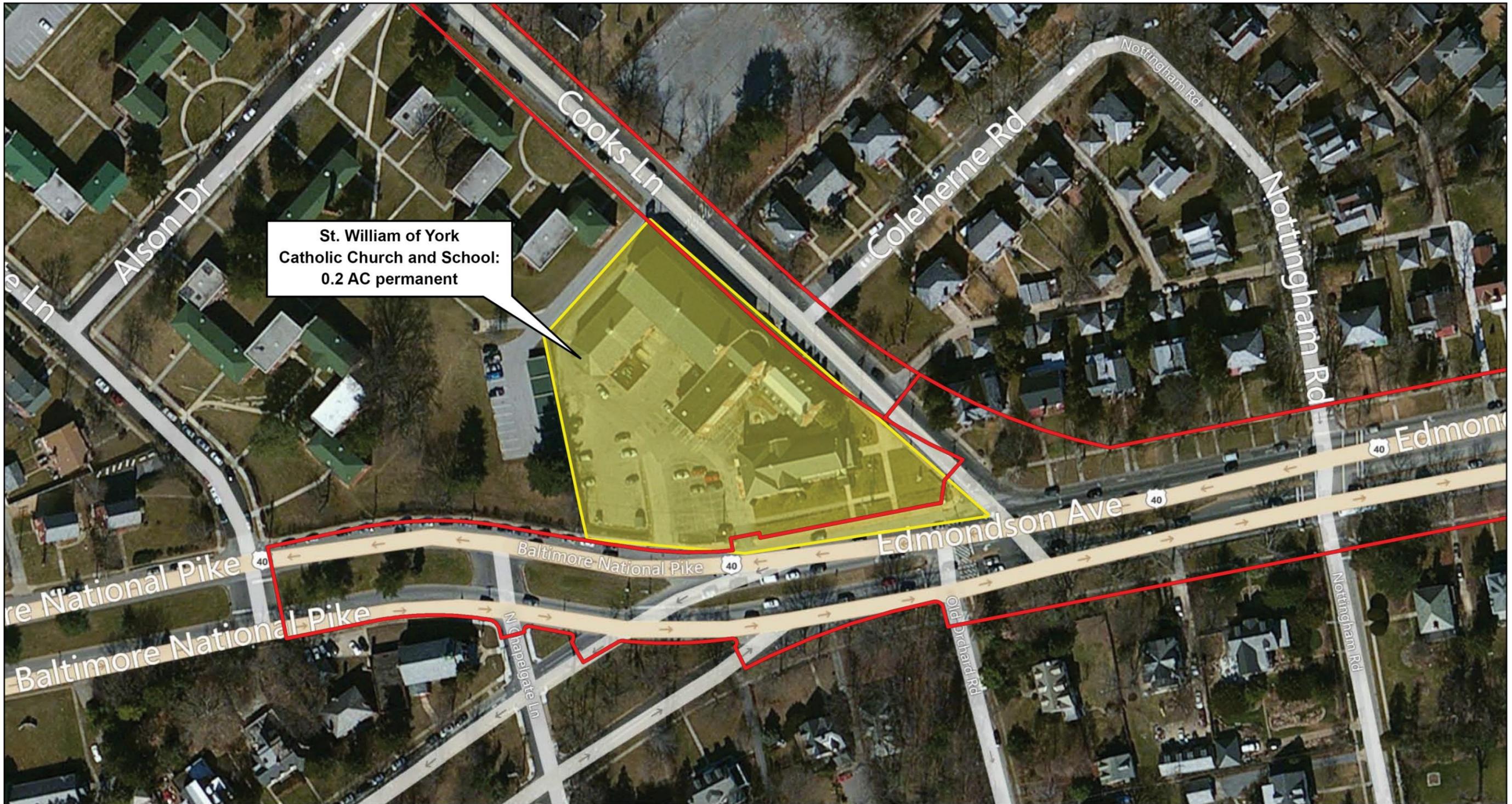
In accordance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations at 36 CFR Part 800, the undertaking would result in an “adverse effect” to the Business and Government Historic District, so a finding of de minimis impact cannot be made. Therefore, an avoidance alternative evaluation and least overall harm analysis for the properties were conducted and are included in **Sections 6.9** and **6.10**, respectively, of this Draft Section 4(f) Evaluation.



108-12 and 114 East Lombard Streets



Figure 6-13: Boston Street Pier Park and St. Casimir's Park



St. William of York
Catholic Church and School:
0.2 AC permanent

LEGEND:

	Limit of Disturbance
	Historic Properties

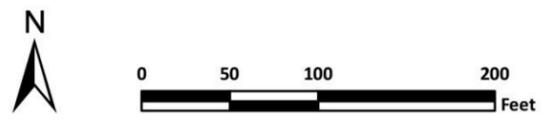
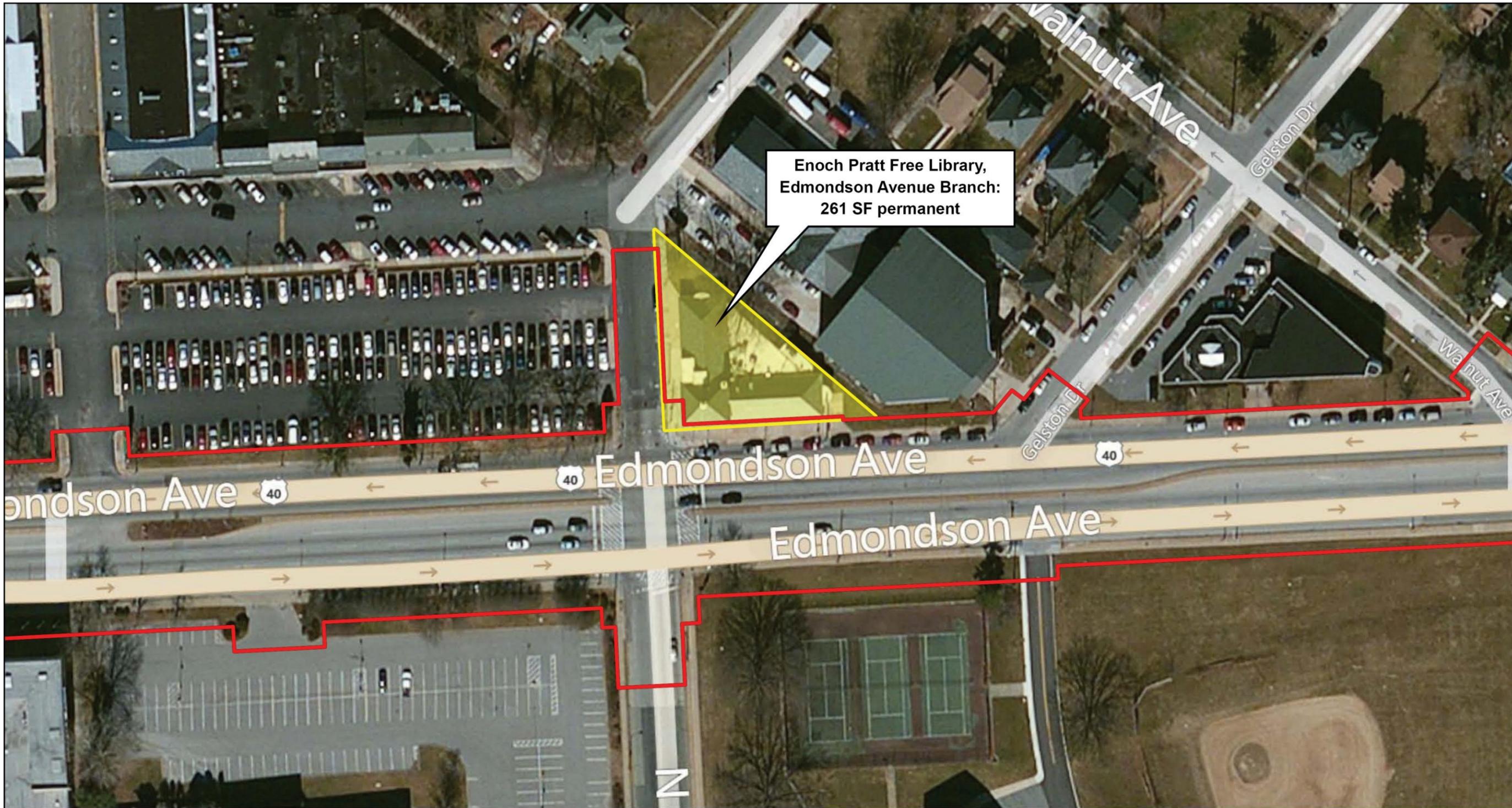


Figure 6-14: St. Williams of York Catholic Church and School



Enoch Pratt Free Library,
Edmondson Avenue Branch:
261 SF permanent

LEGEND:

- Limit of Disturbance
- Historic Properties

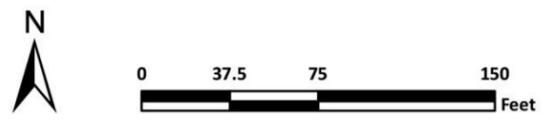


Figure 6-15: Enoch Pratt Free Library, Edmondson Avenue Branch



**Allendale-West Mulberry
Historic District:
0.3 AC permanent**

LEGEND:

- Limit of Disturbance
- Historic Properties

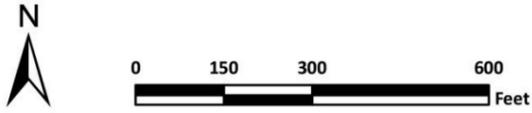


Figure 6-17: Allendale-West Mulberry Historic District

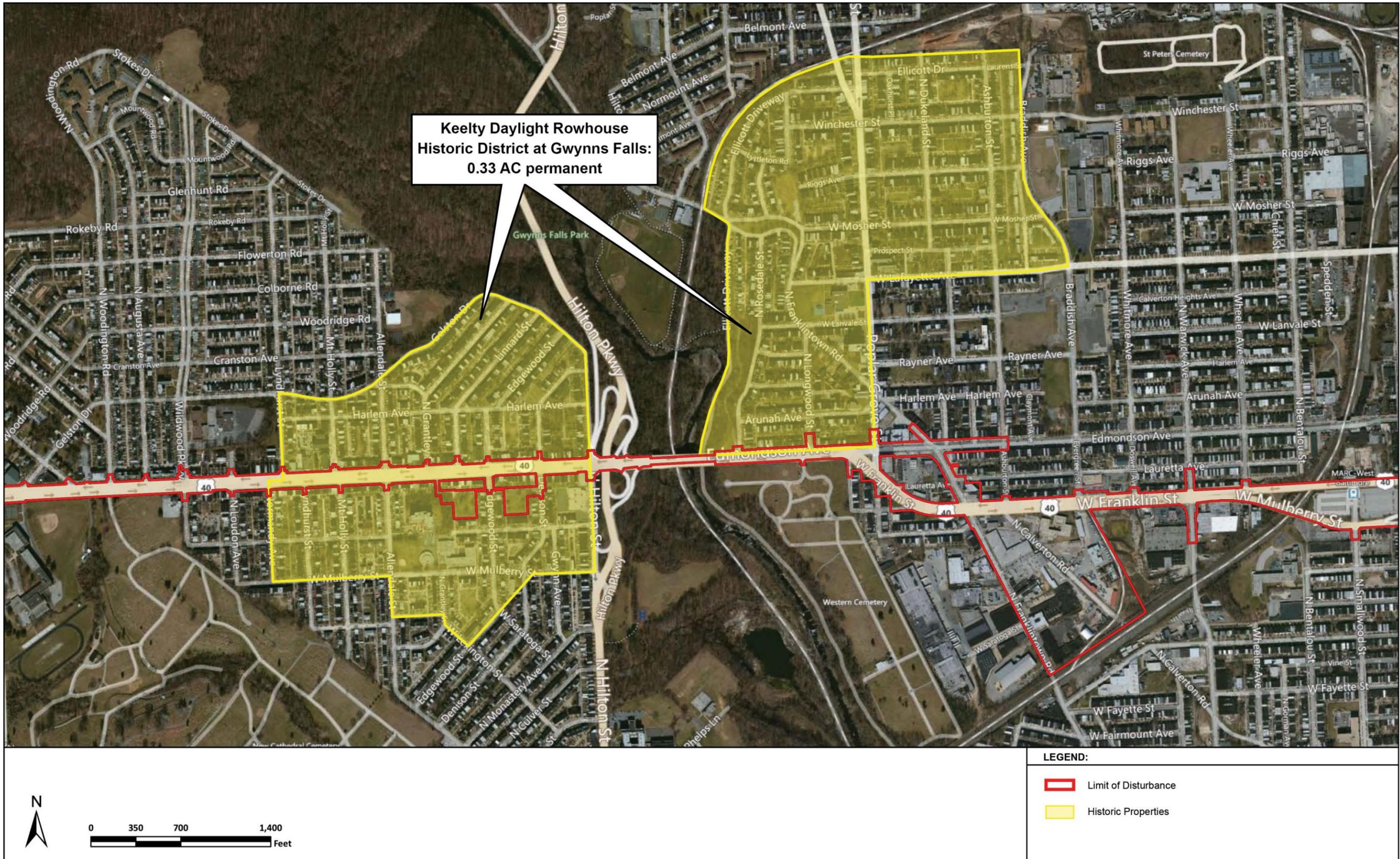


Figure 6-18: Keilty Daylight Rowhouse District at Gwynns Falls



**Greater Rosemont
Historic District:
0.01 AC permanent**

LEGEND:

- Limit of Disturbance
- Historic Properties

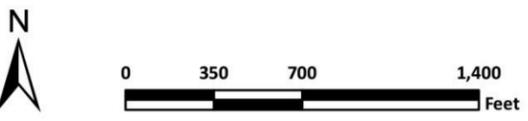


Figure 6-19: Greater Rosemont Historic District



**Edmondson Avenue
Historic District:
70 SF permanent**

LEGEND:

- Limit of Disturbance
- Historic Properties

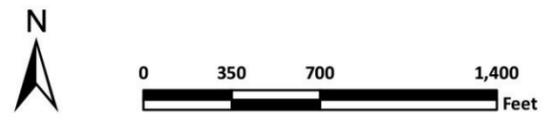


Figure 6-20: Edmondson Avenue Historic District

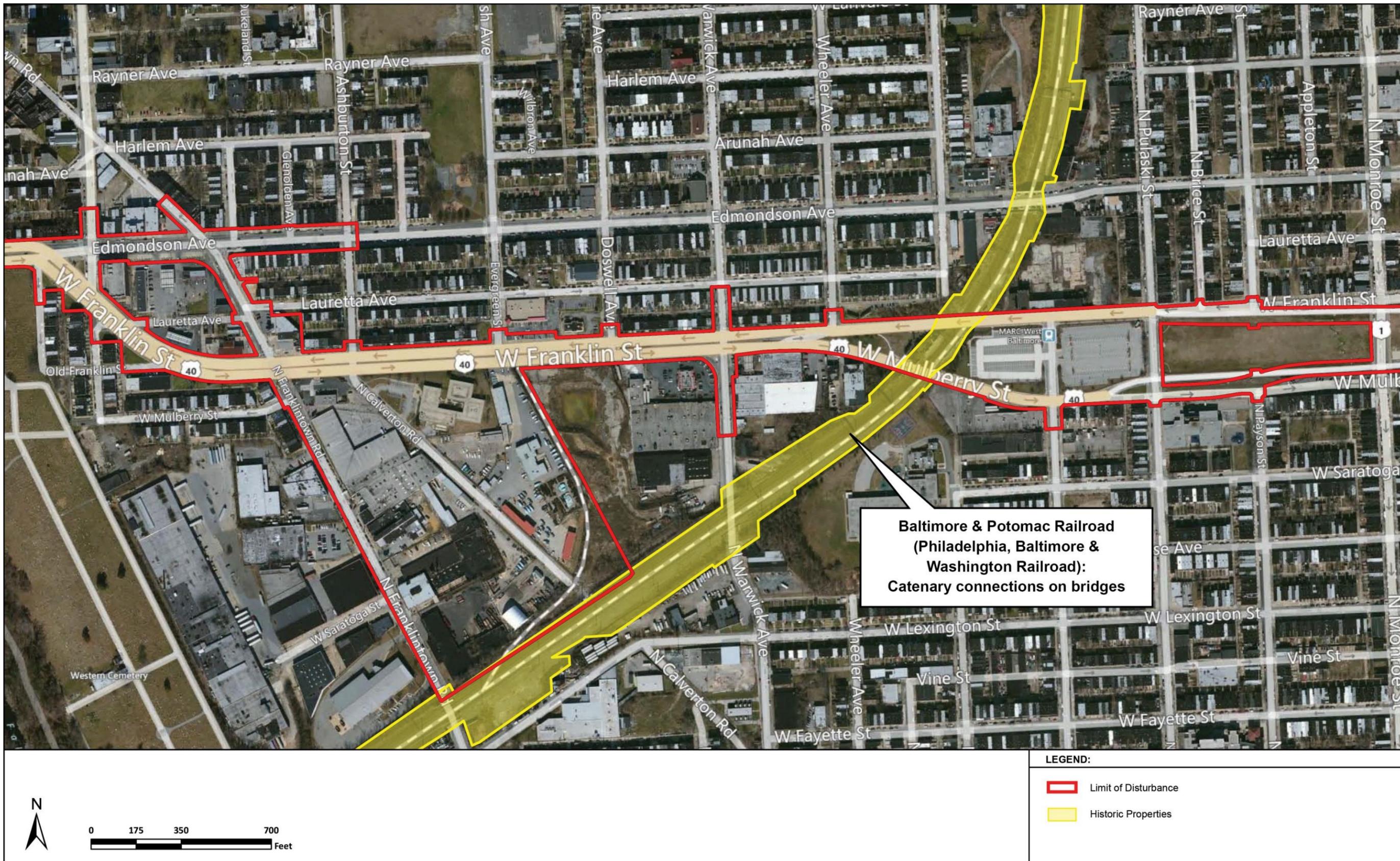


Figure 6-21: Baltimore & Potomac Railroad (Philadelphia, Baltimore & Washington Railroad)



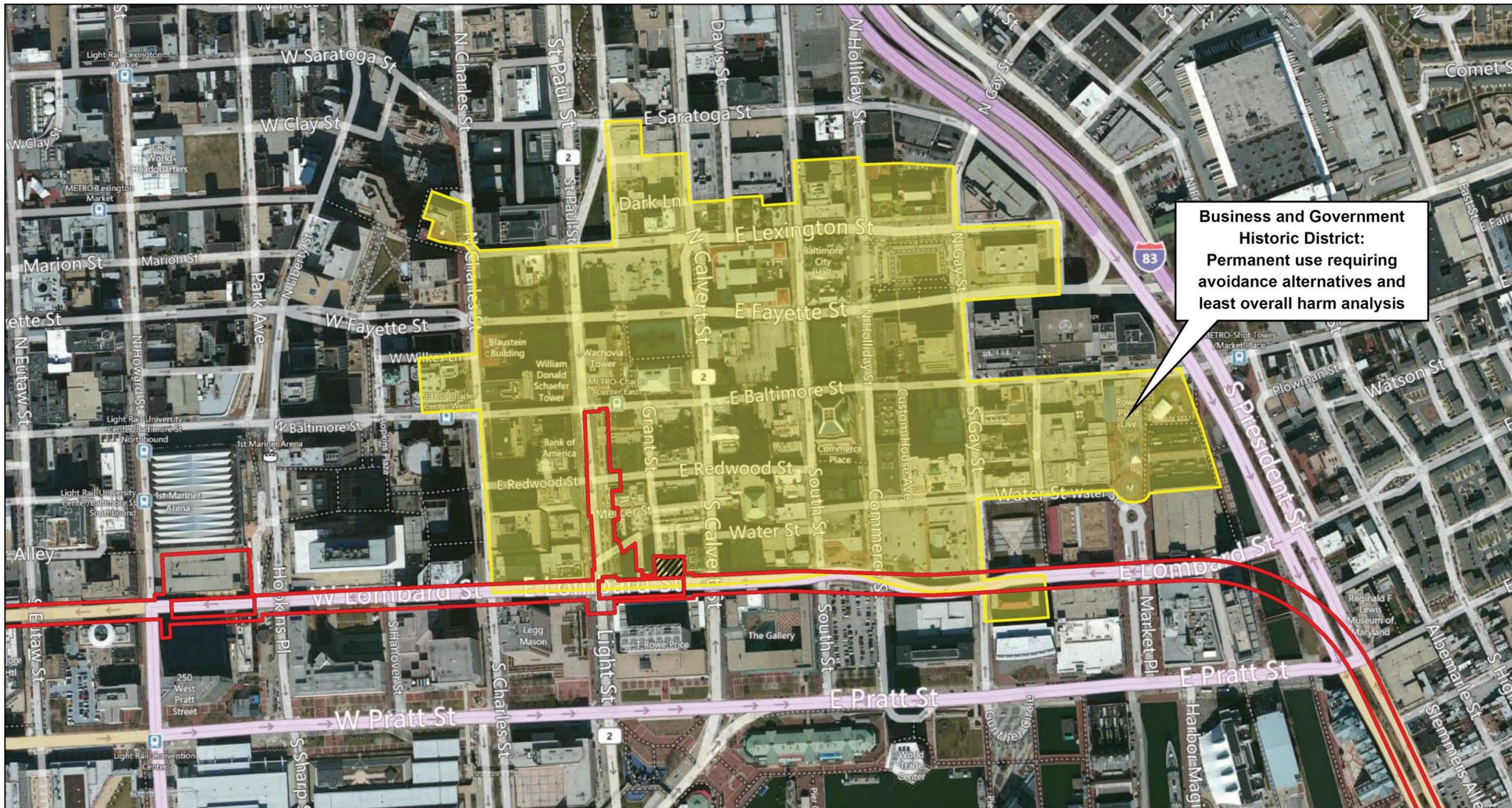
**Union Railroad:
Track replacement
and bridge repair**

LEGEND:

- Limit of Disturbance
- Historic Properties



Figure 6-22: Union Railroad



**Business and Government
Historic District:
Permanent use requiring
avoidance alternatives and
least overall harm analysis**

LEGEND:

- Limit of Disturbance
- Historic District
- Contributing Properties affected by the Inner Harbor Station Preferred Alternative

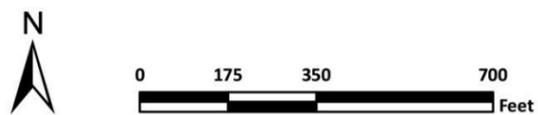


Figure 6-23: Business and Government Historic District

6.9 Alternatives to the Use of the Section 4(f) Resource

6.9.1 Inner Harbor Station Avoidance Alternatives

The area served by the proposed Inner Harbor Station includes the core of the downtown central business district (CBD), characterized by a dense concentration of office development, financial institutions, and Baltimore City government offices. The station would allow convenient transit access to the recreation activities, museums, entertainment, shops, restaurants, and other attractions concentrated at the Inner Harbor. Thus, the Inner Harbor Station location would support the project need of increased transit accessibility in the corridor, by providing improved transit access to major employment and activity centers within and around the CBD and Inner Harbor areas from other locations along the project study corridor.

The Inner Harbor Station location was also selected to enhance connections to existing transit routes. A station entrance at the northeast corner of East Lombard and Light Streets would best accommodate a pedestrian tunnel underneath the east sidewalk of Light Street and allow a direct connection to the Charles Center Metro Station, located underneath East Baltimore Street approximately two blocks to the north. The station would be within the area of MTA core bus service in the CBD. Fifty-six bus lines serve the CBD including nine lines operating north-south routes via North Charles and St. Paul Streets.

It is projected that the Inner Harbor Station would experience the highest volume of passenger use on the Red Line. In 2035, the design year for the project, there would be an average of 55,000 daily trips on the Red Line. The number of daily boardings and alightings at the Inner Harbor Station would each be in excess of 13,000. Of those daily trips, approximately 6,300 passengers would be transferring to the Charles Center Metro Station, and 6,300 would be transferring from the Charles Center Metro Station.

East Lombard Street, the location of the Preferred Alternative Inner Harbor Station, comprises the southern boundary of the Business and Government Historic District. In addition to the vacant buildings at 108-12 and 114 East Lombard Streets, there are multiple Section 4(f) properties within the Inner Harbor Station area. Each of the properties contains contributing buildings to the Business and Government Historic District, and includes:

- 34-36 Light Street
- 31 Light Street
- 104 East Lombard Street /111 Water Street

Alternatives that avoid all Section 4(f) properties at this location have been evaluated, as well as alternatives that would avoid individual Section 4(f) properties. Three total avoidance alternatives, in addition to the No-Build Alternative, have been developed and are discussed below and identified in **Figure 6-24**. Each avoidance alternative is described from west to east, and analyzed in accordance with the definition of *feasible and prudent avoidance alternative* found in 23 CFR 774.17.

6.9.2 Inner Harbor Station No-Build

Under the Inner Harbor Station No-Build Alternative, the Red Line would be constructed, but a passenger station would not be included at the Inner Harbor location. The Inner Harbor No-Build would avoid all Section 4(f) use associated with the Inner Harbor Station; however, the Inner Harbor Station No-Build Alternative does not meet the project purpose and need because it:

- would not increase transit accessibility in the corridor by providing improved transit access to major employment and activity centers; eliminating the Inner Harbor Station would likely result in decreased ridership because it would not service passengers working in the downtown area; and
- would not enhance connections among existing transit routes in the corridor because it would not serve passengers transferring to and from the Charles Center Metro Station.

Although the Inner Harbor Station No-Build Alternative would result in no impacts to Section 4(f) properties, it is not prudent because it would be unreasonable to proceed with the Inner Harbor Station No-Build Alternative in light of the project's stated purpose and need, specifically the needs for increased transit accessibility in the corridor by providing improved transit access to major employment and activity centers, and enhanced connections to existing transit routes. The Inner Harbor Station No-Build Alternative, while feasible, is not and prudent and it is being eliminated because it causes severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) properties.

6.9.3 Inner Harbor Station Avoidance Alternative 1 (Transamerica Plaza)

Under Inner Harbor Station Avoidance Alternative 1, the station entrance would be constructed at the southwest corner of East Lombard and Light Streets in the plaza outside the Transamerica Tower located at 100 Light Street. A three-level underground station would be required to minimize ancillary equipment space requirements on the surface level. However, ventilation exhaust structure ancillary building would need to be constructed at the surface level within the plaza. The underground station structure would be constructed beneath East Lombard Street between Light Street and South Charles Streets, with emergency exits in the sidewalk on the north side of East Lombard Street at both ends of the station structure.



Figure 6-24: Location of Avoidance Alternatives

As shown in the photo, the Transamerica Tower is a 37-story skyscraper that was constructed in 1973. It occupies one square block between East Lombard and East Pratt Streets, and Light and South Charles Streets. A courtyard plaza surrounds the building. The tower includes a three-level underground parking garage comprised of 269 parking spaces and mechanical equipment rooms that extend under the plaza. The building leases Class A office space to multiple tenants and is currently at 95 percent occupancy.



Transamerica Plaza and Tower

Since the footprint of the Transamerica underground parking garage extends under the plaza surrounding the building, structural underpinning of the building foundation, as well as the foundation columns of the garage at 30 Light Street, would be required to place the underground station structure and entrance at this location. Structural underpinning is the process of physically strengthening and stabilizing the foundation of an existing building or other structure, and is accomplished by extending the building's foundation in depth or in breadth so it either rests on a more supportive soil stratum or distributes its load across a greater area. A variety of construction methods may be used, and the process is generally elaborate and expensive. Because of its configuration, parking in all 269 parking spaces in the Transamerica Tower garage would likely be permanently prohibited because of disruption of traffic circulation patterns from the required structural underpinning, and relocation of the mechanical rooms. Retrofitting the underground structures would be significantly complex and costly.

With the station entrance at the southwest corner of the intersection, an extension of the pedestrian tunnel across Light Street would be required. Extending the underground connection to Charles Center Metro Station across Light Street would result in a complex sequencing of construction and maintenance of traffic across Lombard Street. In addition to the staged lane closures on East Lombard Street for the cut-and-cover construction of the station structure, closure of the East Lombard and Light Streets intersection would be required, and traffic rerouted, for a period of approximately 6 to 12 months.

The estimated cost of Inner Harbor Avoidance Alternative 1, including right-of-way acquisition, garage reconfiguration, construction of the three-level station structure, and additional pedestrian tunnel segment, would be approximately \$171.1 million.

Inner Harbor Station Avoidance Alternative 1, while feasible, is not prudent because it 1) would cause severe disruption to established communities because of traffic impacts during construction requiring closure of the intersection of Light and East Lombard Streets, in addition to the required lane closures on East Lombard Street for the cut-and-cover construction of the underground station structure; 2) results in additional construction costs of an extraordinary magnitude; 3) causes other unique problems or unusual factors, specifically the difficulty of retrofitting the below grade structures and elimination of the 269-space parking garage beneath the Transamerica tower and plaza; and 4) involves multiple factors, such as increased traffic disruptions, a business displacement, and high construction costs, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Avoidance Alternative 1, while feasible, is not prudent and it is being eliminated because it causes severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) properties.

6.9.4 Inner Harbor Station Avoidance Alternative 2 (Brookshire Suites Hotel)

Under Inner Harbor Station Avoidance Alternative 2, the station entrance and the ancillary facility building would be constructed on the northwest corner of East Lombard and Calvert Streets, on the site occupied by the Brookshire Suites Hotel. Complete demolition of the Brookshire Suites Hotel building would be required, and the business would be relocated. The underground station structure would be constructed along East Lombard Street between Light



Brookshire Suites Hotel

and South Calvert Streets. Emergency exits at both ends of the station structure would be constructed in the sidewalk on the south side of East Lombard Street.

The Brookshire Suites Hotel is a 12 story building, constructed in 1958, occupying the parcel at 120 East Lombard Street (see photo). It contains 97 guest rooms and suites, a business center, fitness room, a convenience store marketplace, and catered meeting and event space.

The first row of columns of the 100 East Pratt Street parking garage would require structural underpinning for stabilization of the foundation during construction. The potential for temporary access restrictions of building occupants during construction activities would be determined during Final Design. The underground pedestrian connection to Charles Center Metro Station would require an additional tunnel segment to be constructed underneath East Lombard Street between the station structure and Light Street. This would be constructed using a cut-and-cover method, causing additional disruptions

to East Lombard Street beyond those required for construction of the underground station structure. Furthermore, riders transferring to and from the Charles Center Metro Station would be required to walk an additional block between stations via the underground pedestrian tunnel.

The estimated cost of Inner Harbor Station Avoidance Alternative 2, including purchase and demolition of the Brookshire Suites Hotel building, relocation of the business, stabilization of the 100 East Pratt Street garage foundation, and construction of the two-level station structure, would be approximately \$146.1 million.

Inner Harbor Station Avoidance Alternative 2, while feasible, is not prudent because it 1) results in additional construction costs of an extraordinary magnitude and 2) causes other unique problems or unusual factors, specifically the need to construct a pedestrian tunnel an additional block under East Lombard Street, resulting in additional construction impacts and lane closures on East Lombard Street and an increased distance for riders to travel between the Charles Center Metro and Red Line Inner Harbor Stations.

Inner Harbor Station Avoidance Alternative 2, while feasible, is not prudent and it is being eliminated because it causes severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) properties.

6.9.5 Inner Harbor Station Avoidance Alternative 3 (Parking Lot)

Under Inner Harbor Station Avoidance Alternative 3, the station entrance would be constructed on the southeast corner of East Lombard and South Street on the site of an active parking lot (see photo) comprised of approximately 130 parking spaces, and the ancillary facility building would be built on the same property. The parking lot would be acquired and the business relocated. A three-level underground station structure would be constructed to the east of North Calvert Street. A three-level station would be required because of the depth needed to tunnel underneath and avoid impacts to the United States Custom House, a National Register-listed building on the northeast corner of East Lombard and North Gay Streets to the east. Emergency exits would be constructed in the plaza on the north side of Lombard Street and another in the sidewalk on this block of East Lombard Street. The Approximate cost of this avoidance alternative, including land acquisition, business relocation, and construction of the three-level station structure would be approximately \$131.8 million.

A direct underground connection to Charles Center Metro Station would not be feasible from this location. Passengers wishing to connect to and from the Charles Center Metro Station would be required to leave the system by ascending approximately 70 feet from the station platform to the entrance/exit, traveling approximately four city blocks between stations, and descending another 70 feet to the platform at the other station. A passenger's willingness to make a transit connection diminishes sharply when the length of the walk is greater and a transfer would require leaving the transit system. Therefore, without a direct connection between systems, projected ridership could be impacted. This alternative would not meet the project's stated need to enhance connections among existing transit routes in the corridor.



Parking Lot at East Lombard between South and Commerce Streets

Inner Harbor Station Avoidance Alternative 3 is not prudent because it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need, specifically the lack of a direct connection to the Charles Center Metro Station.

Inner Harbor Station Avoidance Alternative 3, while feasible, is not prudent and it is being eliminated because it causes severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) properties.

6.9.6 Avoidance Analysis Conclusion

Based on the evaluation presented in this section, there is no feasible and prudent avoidance alternative to the use of land from a Section 4(f) property.

6.10 Evaluation of the Alternative Causing the Least Overall Harm

6.10.1 Design Change Avoidance Alternatives for Individual Section 4(f) Properties

Pursuant to 23 CFR 774.3(c), if the avoidance analysis determines that there is no feasible and prudent avoidance alternative, only the alternative that causes the least overall harm to Section 4(f) property may be approved. Since the previous discussion demonstrates that there is no feasible and prudent avoidance alternative, all of the other alternatives were evaluated to determine which alternative would cause the least overall harm to Section 4(f) property. This section evaluates those alternatives, including alternatives that would eliminate or reduce the use of individual Section 4(f) properties.

There are seven factors to be considered in identifying the alternative that would cause the least overall harm. These factors are: the ability to mitigate adverse impacts to each Section 4(f) property including any measures that result in benefits to the property; the relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that

qualify each Section 4(f) property for protection; the relative significance of each Section 4(f) property; the views of the official(s) with jurisdiction over each Section 4(f) property; the degree to which each alternative meets the purpose and need for the project; after reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f); and substantial differences in costs among the alternatives (see 23 CFR 774.3(c)(1)).

The location of the least harm alternatives are presented in **Figure 6-25**.

6.10.2 Inner Harbor Station Alternative 4 (34-36 Light Street)

The four-story brick former warehouse building at 34-36 Light Street was constructed with stylized and austere classical details in 1905 (see photo). Royal Farms, a convenience store, occupies most of the first floor and office space is available on the three floors above. The building has been recently retrofitted and rehabilitated. Most building sections behind the North Bay facing Light Street and the west bay facing East Lombard Street are incorporated into the garage that flanks the former warehouse building.



34-36 Light Street

The building played a role in Baltimore City's economic, commercial, and physical growth during the Business and Government Historic District's period of significance. One of the many early twentieth century low-scale buildings with classical details built during the years after Baltimore's Great Fire of 1904. The building retains enough integrity to be a contributing resource to the district. It retains its original location. Although a number of the surrounding buildings have been replaced with larger scale

commercial buildings, such as the ten-story garage that flanks it, there are still other nearby buildings from the historic district's period of significance. In addition, the area is still Baltimore's active business and government district. The building was originally constructed as eight connected warehouses; construction of the adjacent garage demolished five of these warehouses, and portions of the remaining building have been incorporated into the garage, although the façades have been retained. In addition, the first floor window sashes and doors are recent replacements. However, the building still reads as a product of its time and retains most of its original character-defining features including stylized classical details such as brackets with guttae and keystones below the cornice, and brick pilasters.

Under Inner Harbor Station Alternative 4, the station entrance would be constructed at the northwest corner of East Lombard and Light Streets at the site of the 34-36 Light Street building. The contributing historic building would be demolished, and the Royal Farms and

office tenants on the upper floors would be relocated. The underground station would require three levels to minimize surface ancillary facility building space requirements and fit within the existing footprint. The station structure would be beneath East Lombard Street between Light Street and South Charles Streets. Emergency exits at both ends of the station structure would be constructed in the sidewalk on the south side of East Lombard Street. The foundation of the parking garage at 30 Light Street and the first row of foundations of the parking garage under the Transamerica building would require structural underpinning for stability. The extent of business disruptions, if any, would be further identified during Final Design of the project.

As with Inner Harbor Station Avoidance Alternatives 1, locating the station entrance on the west side of Light Street would require an extension of the pedestrian tunnel across Light Street. This would result in a more complex sequencing and maintenance of traffic because of the need to closure of the intersection of East Lombard and Light Streets for a period of 6 to 12 months. In addition, lane closures would be required on East Lombard Street for the cut-and-cover construction of the underground station structure.

The estimated cost of Inner Harbor Station Alternative 4, including right-of-way acquisition, business relocation, building demolition, and construction of the three-level station structure and pedestrian tunnel extension would be approximately \$131.3 million.

6.10.3 Inner Harbor Station Alternative 5 (30 Light Street Parking Garage)

Under Inner Harbor Station Alternative 5, the station entrance would be at the northwest corner of East Lombard and Light Streets on the site of an active parking garage at 30 Light Street, and the building would be demolished. The ancillary facility building would be on the same property. The two-level underground station structure would be beneath East Lombard Street between Light Street and South Charles Streets. Emergency exits, located at both ends of the station structure, would be constructed in the sidewalk on the south side of East Lombard Street.

Thirty Light Street is a 10-story tall parking garage facility on the north side of Lombard Street between Light and South Charles Streets (see photo). It was constructed in 2009 of reinforced concrete. The garage partially envelopes 34-36 Light Street, a contributing building to the Business and Government Historic District which houses a Royal Farms convenience store and upper floor office space. The garage includes pedestrian and vehicle entrances on both Light and East Lombard Streets, and contains 520 parking spaces, as well as two active retail spaces on the first floor. A Subway restaurant occupies one of the retail spaces, while the others are vacant.



30 Light Street Parking Garage (flanking 34-36 Light Street)



Figure 6-25: Location of Inner Harbor Station Alternatives Considered in Least Overall Harm Analysis

Because of the existing building configuration and circulation pattern inside the parking garage, partial demolition of the structure and reuse as a parking garage and retail space would not be feasible; the building would have to be demolished and the businesses relocated. Demolition would be difficult and costly because of the size and construction materials of the structure, as well as its location in relation to the Section 4(f) property that the structure partially envelopes.

Structural underpinning of the contributing historic building housing the Royal Farms and upper floor office space would be required for foundation stabilization during construction. With the station entrance at the northwest corner of the intersection, an extension of the pedestrian tunnel across Light Street would also be required.

As with the other alternatives to the west of Light Street, extending the underground connection to Charles Center Metro Station across Light Street would result in a more complex sequencing of construction and maintenance of traffic. In addition to the required closure of a block of East Lombard Street for the cut-and-cover construction of the station structure, extension of the pedestrian tunnel beneath Light Street would require closure of the East Lombard and Light Streets intersection and rerouting of traffic, for a period of approximately 6 to 12 months.

The estimated cost of Inner Harbor Station Alternative 5, including right-of-way acquisition, business relocations, demolition, and construction of the two-level station structure and pedestrian tunnel extension, would be approximately \$154.1 million.

6.10.4 Inner Harbor Station Alternative 6 (31 Light Street)

Thirty-one Light Street is a five-story concrete building, constructed with stylized and austere classical details in 1904-05 (see photo). CVS Pharmacy currently occupies the first floor and office space is available on the floors above.



31 Light Street

The building played a role in Baltimore City's economic, commercial, and physical growth during the period of significance. It is one of the many early twentieth century low scale buildings with classical details built during the years after Baltimore's Great Fire of 1904. The building retains enough integrity to be a contributing resource to the district. It retains its original location. Although a good number of the surrounding buildings have been replaced with larger scale commercial buildings, nearby buildings are still those from the historic district's period of significance. In addition, the area is still Baltimore's active business and government district. The window sashes and doors are recent replacements. In addition, original protruding classical details

were removed during a 1970s remodel that applied a flat metal skin; eliminated projecting elements included at least one string course and much of the cornice. However, during removal

of the skin in the 1990s, these features were replaced in a design similar to the original, and recessed architectural elements, such as the pilasters and concrete panels between the windows (with their diamond shaped details), have been revealed. The building is still representative of that period of architecture.

Under Inner Harbor Station Alternative 6, the historic 31 Light Street building would be demolished and the station entrance and ancillary facility structures would be constructed on the site. The CVS Pharmacy and upper floor office tenants would need to be relocated. The two-level station structure would be underneath East Lombard Street to the east of Light Street. Emergency exits would be constructed in the sidewalk on the south side of East Lombard Street. Because the underground station structure would be adjacent to the proposed underground connection to the Charles Center Metro Station underneath the east sidewalk of Light Street, no additional extensions to the underground pedestrian connector would be required. While lane closures would occur on East Lombard Street during the cut-and-cover construction of the station structure, the intersection of East Lombard and Light Streets could remain open throughout construction activities.

With this alternative, the first row of columns of the 100 East Pratt Street parking garage would require structural underpinning for stabilization of the foundation during construction. The potential and duration for temporary access restrictions and need for relocation of building occupants during construction activities would be determined during Final Design.

The estimated cost of Inner Harbor Station Alternative 6, including real estate acquisition, business relocation, building demolition, and construction of the two-level station structure would be approximately \$130.0 million.

6.10.5 Inner Harbor Station Alternative 7 (100 East Pratt Street Parking Garage)

The station entrance for Inner Harbor Station Alternative 7 would be constructed at the site of a parking garage building at 100 East Pratt Street. The station entrance would be housed within existing retail space on the first floor of the building, with an entrance on the southeast corner of East Lombard and Light Streets. A three-level station structure would be required to minimize ancillary equipment needs at the surface level and minimize impacts to the parking garage business. The underground station structure would be beneath East Lombard Street between Light and Calvert Streets. Emergency exits would be constructed in the sidewalk on the north side of East Lombard Street at both ends of the station structure.

Ventilation equipment would be housed inside the station structure, and ventilation exhaust would be routed through the parking garage. Because the underground station structure would be located adjacent to the proposed underground connection to the Charles Center Metro Station, underneath the east sidewalk of Light Street, no additional extensions to the underground pedestrian connector would be required. While lane closures would occur on East Lombard Street during the cut-and-cover construction of the station structure, the intersection of East Lombard and Light Streets could remain open throughout construction activities.

The 100 East Pratt Street building is an 8-story parking garage facility comprised of 940 parking spaces, which was constructed in two phases in the 1970s (see photo). The building has frontage on East Lombard Street between Light and South Calvert Streets. There are vehicle entrances/exits on Light and South Calvert Street, and a vehicle exit on East Lombard Street. The building includes two first floor retail spaces with pedestrian entrances at the East Lombard Street and Light/South Calvert Street intersections.



100 East Pratt Street Garage

The first floor retail space in the 100 East

Pratt Street garage would need to be reconfigured to accommodate the Inner Harbor Station entrance, and extensive reconstruction of the first column bay double-T girders of the parking garage would be required to facilitate routing ventilation ducting (exhaust chimneys) through the garage building. Six parking spaces on each floor of the garage, 48 parking spaces total, would be permanently displaced within the footprint of the vertical ducts under this alternative. Additionally, all 940 parking spaces of the garage operation would likely be out of service for the duration of the extensive structural modifications, which would take approximately 18 to 24 months. Both existing first floor retail spaces would need to be permanently acquired and relocated to accommodate the ancillary equipment and vent shafts. Structural underpinning of the contributing historic building foundation housing CVS Pharmacy and upper floor office space would be required.

The estimated cost of Inner Harbor Station Alternative 7, including partial acquisition of the garage, stabilization of building foundations, reconfiguration of the garage and retail units, and construction of the three-level station structure would be \$153.5 million.

6.10.6 Inner Harbor Station Alternative 8 (100 East Pratt Street Parking Garage)

Under Inner Harbor Station Alternative 8, the station entrance would be constructed in the sidewalk on the northeast corner of East Lombard and Light Streets, adjacent to the property at 31 Light Street currently housing the CVS Pharmacy. Emergency exits would be in the sidewalk on the south side of East Lombard Street. No additional extensions to the pedestrian connector between the Red Line Inner Harbor and Charles Center Metro Stations would be required because the underground station structure would be constructed adjacent to the proposed tunnel. While closures would occur on East Lombard Street during cut-and-cover construction activities, the intersection at Light and East Lombard Streets would remain open to traffic during construction.

A three-level station structure would be required to house the passenger station and the ventilation equipment to minimize the need for surface structures. The station structure would be beneath East Lombard Street between Light and Calvert Streets. Vertical ventilation ducts would be in the inset corners of the 100 East Pratt Street parking garage located on the south

side of East Lombard Street. In addition to structural underpinning of the first row of columns extensive reconfiguration of the garage building would be required because the non-emergency station ventilation would need to be routed through the garage. This would result in closure of all 940 parking spaces within the garage for a period of approximately 24 months, and the permanent loss of approximately 24 parking spaces. To accommodate all needed ancillary equipment, acquisition and displacement of both first floor retail spaces of the garage building and relocation of the tenants would be required.

There would be access restrictions to the CVS Pharmacy entrance during station entrance construction for a period of approximately 1 to 2 months until temporary pathways could be established. Foundation underpinning of the contributing historic building at 31 Light Street would be required for stabilization. It is not anticipated that structural underpinning of the foundation would harm the rest of the building. The potential for and duration of temporary access restrictions of building occupants would be determined during Final Design.

The estimated cost of Avoidance Alternative 8, permanent acquisition of 24 parking spaces from the garage at 100 East Pratt Street, acquisition and displacement of both retail spaces and relocation of the tenants, stabilization of the garage foundation, and construction of the three-level station structure would be \$150.9 million.

6.10.7 Inner Harbor Station Alternative 9 (104 East Lombard Street/111 Water Street)

The 104 East Lombard Street/111 Water Street building is a four-story brick building constructed with stylized and austere classical details in 1906 (see photo). It has two commercial storefronts on Lombard Street and a restaurant on the Water Street entrance, with office space on the upper floors.

The building played a role in Baltimore City's economic, commercial, and physical growth during the period of significance. It is also one of the many early twentieth century low scale buildings with classical details built during the years after Baltimore's Great Fire of 1904. The building retains enough integrity to be a contributing resource to the district. It retains its original location. Although a good number of the surrounding buildings have been replaced with larger scale commercial buildings, nearby buildings are still those from the historic district's period of significance. In addition, the area is still Baltimore's active business and government district. The doors and window sashes are replacements, but otherwise the building retains most of its original character-defining features including austere classical details such as stylized pilasters and panels.



104 East Lombard Street/111
Water Street

Under Inner Harbor Station Alternative 9, the historic building at 104 East Lombard Street/111 Water Street would be demolished and the station entrance and ancillary facility building would be constructed on the site. A three-level station structure would be underneath East Lombard Street to the east of Light Street. The three-level structure would be required because of the

narrow width of the lot at this property, and some of the ancillary structures would need to be housed in the station structure rather than above ground.

Emergency exits would be constructed in the sidewalk on the south side of Lombard Street. No additional extensions to the pedestrian connector between the Red Line Inner Harbor and Charles Center Metro Stations would be required because the underground station structure would be constructed adjacent to the proposed tunnel. While closures would occur on East Lombard Street during cut-and-cover construction activities, the intersection at Light and East Lombard Streets would remain open to traffic during construction.

The first row of the 100 East Pratt Street parking garage would require underpinning. The potential for and duration of, temporary access restrictions of building occupants would be determined during Final Design. All businesses and tenants of 104 East Lombard Street/111 Water Street would need to be relocated.

The estimated cost of Inner Harbor Station Alternative 9, including real estate acquisition, business relocation, building demolition, and construction of the three-level station structure would be approximately \$132.3 million.

6.10.8 Least Overall Harm Analysis Summary

The Preferred Alternative proposed Inner Harbor Station would require a Section 4(f) use because of demolition of two contributing historic buildings to the Business and Government Historic District, located at 108-112 and 114 East Lombard Street. Each alternative was weighed against the seven criteria for evaluating least overall harm per 23 CFR 774.3(c)(1).

1. The ability to mitigate adverse impacts to each Section 4(f) property including any measures that result in benefits to the property: For those alternatives that include demolition of contributing buildings to the Business and Government Historic District (Preferred Alternative proposed Inner Harbor Station and Alternatives 4, 6, and 9), mitigation of adverse impacts would be the same or similar, and would be outlined in the Programmatic Agreement (PA) with the SHPO and consulting parties. Under each of these alternatives, impacts to additional contributing buildings because of structural underpinning would be avoided. Mitigation for the minor impacts because of structural underpinning of contributing buildings under Inner Harbor Station Alternatives 5, 7, and 8 would be mitigated through the terms identified in the PA.
2. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection: There would be “no adverse effect” to the Business and Government Historic District as a result of structural underpinning to contributing buildings under Inner Harbor Station Alternatives 5, 7, and 8. Of the alternatives that would require demolition of contributing buildings, several factors were considered. The Business and Government Historic District includes over 200 contributing buildings. Approximately 15 buildings within the district are individually listed or eligible for listing in the National Register, such as Baltimore City Hall and the Old Post Office and Court House. The buildings in the vicinity of the Inner Harbor Station are not individually listed in the National Register.

However, because of their prominent locations with frontages on multiple streets, the remaining harm to the Business and Government Historic District would be greater under Inner Harbor Station Alternatives 4, 6, and 9 than under the Preferred Alternative. The contributing buildings at 108-112 and 114 East Lombard Street are in the middle of a block with frontage on Lombard Street only, making them less prominent within the district than the other buildings being considered for demolition.

3. The relative significance of each Section 4(f) property: The contributing buildings in the vicinity of the Inner Harbor Station are considered to be of equal significance within the historic district. However, the historic buildings at the intersection at 31 Light Street and 34-36 Light Street are large and visually prominent from several vantage points. The mid-block building at 104 East Lombard Street (111 Water Street) has frontage on two streets within the district and occupies a larger footprint than those buildings at 108-112 and 114 East Lombard Street. Additionally, Water Street retains much of its historic character, and demolition of 104 East Lombard Street (111 Water Street) would affect the character of two blocks within the historic district.
4. The views of the official(s) with jurisdiction over each Section 4(f) property: At a consultation meeting on July 17, 2012 with the MTA and FTA, the MHT (official with jurisdiction) expressed informal support for the Preferred Alternative proposed Inner Harbor Station. This occurred in context of a discussion regarding projected ridership and connections at the Inner Harbor Station in relation to Purpose and Need, constraints within the vicinity including historic buildings and active businesses, and avoidance and minimization measures and consideration undertaken by the Red Line team. MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation, and their views would be detailed in the Final Section 4(f) Evaluation.
5. The degree to which each alternative meets the purpose and need for the project: Each alternative meets the Purpose and Need; however, Inner Harbor Station Alternative 5 would require an additional connection to the proposed pedestrian tunnel leading to the Charles Center Metro Station.
6. After reasonable mitigation the magnitude of any adverse impacts to properties not protected by Section 4(f): only the Preferred Alternative proposed Inner Harbor Station would not directly impact or displace any current or foreseeable business operations within the downtown central business district. Each of the other alternatives evaluated in this least overall harm analysis would require permanent impacts or relocations to active businesses. This factor weighed heavily in the initial selection of a site for the Inner Harbor Station ancillary buildings, and in this draft least overall harm analysis.
7. Substantial differences in costs among the alternatives: The Preferred Alternative proposed Inner Harbor Station would cost less than all other alternatives under consideration, and includes real estate costs, business relocations required under each of the other Inner Harbor Station alternatives, and construction costs.

Table 6-4 presents a comparison of the alternatives by each of the seven factors discussed above. Based on the draft evaluation presented in this section and in **Table 6-4**, several factors outweigh the importance of protecting the Section 4(f) properties at 108-112 and 114 East Lombard Street. A final analysis and conclusion would be included in the Final Section 4(f)

Evaluation, based on the views of the official with jurisdiction, Section 106 consulting parties, and comments on this Draft Section 4(f) Evaluation.

6.10.9 All Possible Planning to Minimize Harm

“All possible planning,” as defined in 23 CFR 774.17, includes all reasonable measures to minimize harm and mitigate for adverse impacts and effects. Pursuant to 23 CFR 774.17, a de minimis impact determination inherently includes the requirement for all possible planning to minimize harm because impacts have already been reduced to a de minimis level. Therefore, additional planning to minimize harm is not required for those properties where a de minimis impact determination is made.

Overall, the Preferred Alternative minimizes harm to Section 4(f) resources by incorporating measures into the project that diminish impacts on and the use of the resources. Such measures have comprised, but are not limited to: the inclusion of underground segments and stations to minimize surface level impacts to protected resources; alignment shifts along the corridor as feasible; elimination of street-level parking along the surface level transitway segments where resources are present; and selecting stormwater management options that reduce or eliminate the need for extensive grading.

For Section 4(f) uses that cannot be avoided or further minimized, mitigation is being considered. The level of mitigation being considered is commensurate with the severity of the impact on the Section 4(f) property. Such mitigation would be determined through consultation with the officials having jurisdiction over each resource and presented in the Final Section 4(f) Evaluation.

A draft Programmatic Agreement (PA) has been developed in accordance with the provisions of Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations at 36CFR Part 800. Potential mitigation measures for impacts to historic resources have been developed in coordination with the MHT and the consulting parties. The PA is expected to be signed prior to the Record of Decision. The determinations of eligibility, Red Line project effects on historic sites, and the PA will be submitted to the Advisory Council on Historic Preservation (ACHP).

All minimization and mitigation measures will be documented in the Final Section 4(f) Evaluation. FTA will make a final determination of whether all possible planning has occurred based on the Final Section 4(f) Evaluation, after consideration of comments on the Draft Section 4(f) Evaluation.

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

<p>Inner Harbor Station Alternatives (refer to Figure 6-25)</p>	<p>i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)</p>	<p>ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection</p>	<p>iii. The relative significance of each Section 4(f) property</p>	<p>iv. The views of the official(s) with jurisdiction over each Section 4(f) property</p>	<p>v. The degree to which each alternative meets the purpose and need for the project</p>	<p>vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)</p>	<p>vii. Substantial differences in costs among the alternatives</p>
<p>Preferred Alternative Proposed Inner Harbor Station (108-12 and 114 East Lombard Street)</p>	<p>Impacts would be mitigated as proposed in the Programmatic Agreement.</p>	<p>Harm to Business and Government District because of demolition of two contributing buildings. Mid-block buildings less visually prominent than those located at the intersection; mainly visible from East Lombard Street with no frontage on Water Street.</p>	<p>Smaller 3 and 4 story brick buildings at 108-112 and 114 East Lombard Street are less visually prominent in height and in their mid-block locations; they extend less than half a block to Water Street, but significant in that there are two separate parcels/buildings.</p>	<p>MHT verbally expressed support for the Preferred Alternative proposed Inner Harbor Station at a meeting on July 17, 2012 with the MTA and FTA. Comments made reflected support in light of the importance of the Inner Harbor Station to the Red Line project, and the constraints of the area. MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Meets the project purpose and need, particularly because of location of station entrance and potential to enhance connectivity to the Metro via an underground pedestrian tunnel.</p>	<p>Access restrictions to entrance to CVS Pharmacy at 31 Light Street for approximately 1 to 2 months until temporary pathways could be established. Minor impacts to 100 East Pratt Street parking garage during structural underpinning work; no loss of parking to garage and no business relocations required under this alternative.</p>	<p>Alternative would cost approximately \$128.7 million.</p>

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

<p>Inner Harbor Station Alternatives (refer to Figure 6-25)</p>	<p>i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)</p>	<p>ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection</p>	<p>iii. The relative significance of each Section 4(f) property</p>	<p>iv. The views of the official(s) with jurisdiction over each Section 4(f) property</p>	<p>v. The degree to which each alternative meets the purpose and need for the project</p>	<p>vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)</p>	<p>vii. Substantial differences in costs among the alternatives</p>
<p>Inner Harbor Station Alternative 4 (34-36 Light Street)</p>	<p>Similar to the Preferred Alternative proposed Inner Harbor Station, impacts would be mitigated as proposed in the Programmatic Agreement.</p>	<p>Demolition of historic building at 34-36 Light Street with two prominent facades visible from Light and East Lombard Streets would cause slightly greater harm to Business and Government District than Preferred Alternative proposed Inner Harbor Station.</p>	<p>Former warehouse building housing the Royal Farms is a visually prominent 4-story building because of its location on a corner within the Historic District.</p>	<p>MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Meets the project purpose and need, but would require extension of pedestrian tunnel across Light Street.</p>	<p>Construction impacts to the intersection of East Lombard and Light Streets; requires relocation of Royal Farms business and office space tenants.</p>	<p>Alternative would cost approximately \$131.3 million, slightly more than the Preferred Alternative proposed Inner Harbor Station.</p>
<p>Inner Harbor Station Alternative 5 (30 Light Street Parking Garage)</p>	<p>Minimal impacts to contributing building at 34-36 Light Street building, impacts would be mitigated as proposed in the Programmatic Agreement.</p>	<p>Minimal harm to Business and Government Historic District; only structural underpinning of the historic 34-36 Light Street property would occur, with no character defining features compromised.</p>	<p>Former warehouse building housing the Royal Farms is a visually prominent 4-story building because of its location on a corner within the Historic District.</p>	<p>MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Meets the project purpose and need, but would require extension of pedestrian tunnel across Light Street.</p>	<p>Construction impacts to the intersection of East Lombard and Light Streets; requires demolition of 30 Light Street Parking garage and relocation of garage business and retail tenants.</p>	<p>Alternative would cost approximately \$154.1 million, substantially more than the Preferred Alternative.</p>

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

Inner Harbor Station Alternatives (refer to Figure 6-25)	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives
Inner Harbor Station Alternative 6 (31 Light Street)	Similar to the Preferred Alternative proposed Inner Harbor Station, impacts would be mitigated as proposed in the Programmatic Agreement.	Demolition of historic building at 31 Light Street with three prominent facades visible from Light, East Lombard, and Water Streets; would cause slightly greater harm to Business and Government District than the Preferred Alternative proposed Inner Harbor Station.	31 Light Street building housing the CVS Pharmacy is a visually prominent 5-story building because of its location on a corner within the Historic District.	MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.	Meets the project purpose and need, particularly because of location of station entrance and potential to enhance connectivity to the Metro via an underground pedestrian tunnel.	Minor impacts to 100 East Pratt Street parking garage during structural underpinning work; requires permanent relocation of CVS Pharmacy business and office space tenants.	Alternative would cost approximately \$130.0 million, slightly more than the Preferred Alternative proposed Inner Harbor Station.

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

Inner Harbor Station Alternatives (refer to Figure 6-25)	i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	iii. The relative significance of each Section 4(f) property	iv. The views of the official(s) with jurisdiction over each Section 4(f) property	v. The degree to which each alternative meets the purpose and need for the project	vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)	vii. Substantial differences in costs among the alternatives
Inner Harbor Station Alternative 7 (100 East Pratt Street Parking Garage)	Minimal impacts to contributing building at 31 Light Street, impacts would be mitigated as proposed in the Programmatic Agreement.	Minimal harm to Business and Government Historic District; only structural underpinning of the 31 Light Street property would occur, with no character defining features compromised.	31 Light Street building housing the CVS Pharmacy is a visually prominent 5-story building because of its location on a corner within the Historic District.	MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.	Meets the project purpose and need, particularly because of location of station entrance and potential to enhance connectivity to the Metro via an underground pedestrian tunnel.	Impacts to 100 East Pratt Street parking garage building: temporary closure of all 940 parking spaces for approximately 24 months, business would permanently lose 48 parking spaces, and both first floor retail spaces would be acquired and tenants relocated.	Alternative would cost approximately \$153.5 million, substantially more than the Preferred Alternative.

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

<p>Inner Harbor Station Alternatives (refer to Figure 6-25)</p>	<p>i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)</p>	<p>ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection</p>	<p>iii. The relative significance of each Section 4(f) property</p>	<p>iv. The views of the official(s) with jurisdiction over each Section 4(f) property</p>	<p>v. The degree to which each alternative meets the purpose and need for the project</p>	<p>vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)</p>	<p>vii. Substantial differences in costs among the alternatives</p>
<p>Inner Harbor Station Alternative 8 (100 East Pratt Street Parking Garage)</p>	<p>Minimal impacts to contributing building at 31 Light Street, impacts would be mitigated as proposed in the Programmatic Agreement.</p>	<p>Minimal harm to Business and Government Historic District; only structural underpinning of the 31 Light Street property would occur, with no character defining features compromised.</p>	<p>31 Light Street building housing the CVS Pharmacy is a visually prominent 5-story building because of its location on a corner within the Historic District.</p>	<p>MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Meets the project purpose and need, particularly because of location of station entrance and potential to enhance connectivity to the Metro via an underground pedestrian tunnel.</p>	<p>Impacts to 100 East Pratt Street parking garage building: closure of all 940 parking spaces for approximately 24 months, business would permanently lose approximately 24 parking spaces, and both first floor retail spaces would be acquired and tenants relocated.</p>	<p>Alternative would cost approximately \$150.9 million, substantially more than the Preferred Alternative.</p>

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

<p>Inner Harbor Station Alternatives (refer to Figure 6-25)</p>	<p>i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)</p>	<p>ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection</p>	<p>iii. The relative significance of each Section 4(f) property</p>	<p>iv. The views of the official(s) with jurisdiction over each Section 4(f) property</p>	<p>v. The degree to which each alternative meets the purpose and need for the project</p>	<p>vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)</p>	<p>vii. Substantial differences in costs among the alternatives</p>
<p>Inner Harbor Station Alternative 9 (104 East Lombard Street/111 Water Street)</p>	<p>Similar to the Preferred Alternative proposed Inner Harbor Station, impacts would be mitigated as proposed in the Programmatic Agreement.</p>	<p>Demolition of historic mid-block building at 104-106 East Lombard Street visible from East Lombard and Water Streets would cause slightly greater harm to Business and Government District than the Preferred Alternative proposed Inner Harbor Station.</p>	<p>104 East Lombard Street/111 Water Street)historic 4-story brick building is visually less prominent in the Business and Government Historic District because obits mid-block location on East Lombard Street, but has a large footprint extending to Water Street, which retains several historic buildings, and would impact the historic character of that block as well.</p>	<p>MHT has not provided views regarding this alternative; MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Meets the project purpose and need, particularly because of location of station entrance and potential to enhance connectivity to the Metro via an underground pedestrian tunnel.</p>	<p>Minor impacts to 100 East Pratt Street parking garage during structural underpinning work; current restaurant, retail, and office tenants at 104 East Lombard Street/111 Water Street would need to be permanently relocated.</p>	<p>Alternative would cost approximately \$132.3 million, slightly more than the Preferred Alternative proposed Inner Harbor Station.</p>

Table 6-4: Seven Factors for the Evaluation of Least Overall Harm per 23 CFR 774.3(c)(1)

<p>Inner Harbor Station Alternatives (refer to Figure 6-25)</p>	<p>i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)</p>	<p>ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection</p>	<p>iii. The relative significance of each Section 4(f) property</p>	<p>iv. The views of the official(s) with jurisdiction over each Section 4(f) property</p>	<p>v. The degree to which each alternative meets the purpose and need for the project</p>	<p>vi. After reasonable mitigation, the magnitude of any adverse impacts to properties not protected by Section 4(f)</p>	<p>vii. Substantial differences in costs among the alternatives</p>
<p>ANALYSIS RESULTS</p>	<p>The demolition of historic buildings contributing to the Business and Government Historic District would be mitigated as proposed in the Programmatic Agreement under the Inner Harbor Preferred Alternative and Alternatives 4, 6, and 9. Inner Harbor Station Alternatives 5, 7, and 8 would cause minor impacts to the historic district, which would also be mitigated under the terms of the Programmatic Agreement.</p>	<p>Minimal harm to historic buildings in the Business and Government Historic District under Inner Harbor Station Alternatives 5, 7, and 8.</p> <p>Of the Inner Harbor Station Alternatives requiring demolition of historic buildings, Inner Harbor Station Alternatives 4, 6, and 9 would cause slightly greater harm than the Preferred Alternative.</p>	<p>The historic buildings located on the intersection at 31 Light Street and 34-36 Light Street are large and visually prominent within the Business and Government Historic District.</p> <p>The mid-block building at 104 East Lombard Street (111 Water Street) is more visually prominent and occupies a larger footprint than those buildings at 108-112 and 114 East Lombard Street.</p>	<p>MHT verbally expressed support for the Preferred Alternative proposed Inner Harbor Station, and would have an opportunity to review and comment on this Draft Section 4(f) Evaluation.</p>	<p>Each alternative meets the purpose and need. However the Preferred Alternative proposed Inner Harbor Station and Alternatives 6, 7, 8 and 9 better meet the need to connect to existing transit by allowing a shorter connection to underground pedestrian tunnel leading to the Charles Center Metro Station.</p>	<p>Inner Harbor Station Alternatives 4, 5, 6, 7, 8, and 9 would require business relocations. Preferred Alternative proposed Inner Harbor Station would not require business relocations. Inner Harbor Station Alternatives 4 and 5 would cause additional construction impacts to the intersection of East Lombard and Light Streets.</p>	<p>The Preferred Alternative proposed Inner Harbor Station would cost slightly less than Inner Harbor Station Alternatives 4,6, and 9, and substantially less than Inner Harbor Station Alternatives 5, 7, and 8.</p>

6.11 Coordination

- Department of Interior (DOI): This Draft Section 4(f) Evaluation is being provided to the DOI for review.
- Officials with Jurisdiction: coordination activities with the officials with jurisdiction over parks and historic properties in the study area has occurred as follows:
 - Baltimore County Department of Recreation and Parks: Initially contacted via letter in February 2012 requesting assistance in the identification of significant public parks within the study area. Based on subsequent coordination, it was determined that no Section 4(f) resources in Baltimore County would be affected by the Preferred Alternative.
 - Baltimore City Department of Recreation and Parks: Initially contacted via letter in February 2012 requesting assistance in the identification of significant public parks within the study area. A letter expressing Maryland Transit Administration's (MTA) intent to seek temporary occupancy exceptions and de minimis impact findings to parks and recreation areas in Baltimore City is being sent upon circulation of this Draft Section 4(f) Evaluation.
 - Maryland Historical Trust (MHT): Federal Transit Administration (FTA) has consulted with the MHT to delineate the built historic properties Area of Potential Effects, identify historic properties, and evaluate properties not previously evaluated for National Register eligibility. To date, the MHT has reviewed and commented on the following documents (followed by the MHT correspondence date): (1) *Cultural Resources Technical Report: Volume 1 – Red Line Corridor Transit Study: Cultural Resources Reconnaissance Survey* and Area of Potential Effects (APE) delineation (August 25, 2005 letter); (2) evaluations in the *Historic Structures Survey Technical Report* (March 19, 2007 letter); (3) *Cultural Resources Technical Report: Volume 4 – Red Line Corridor Transit Study: Bayview Extension Cultural Resources Reconnaissance Survey* and APE delineation (April 7, 2008 meeting); (4) evaluations in the *Red Line Corridor Transit Study – Bayview Extension; Historic Architectural Resources Survey* (June 9, 2010 letter, also included follow-up comments on original evaluations); (5) refined APE and list of additional properties for evaluation (January 17, 2012 letter); and (6) Determination of Eligibility (DOE) Forms, Short Forms for Ineligible Properties, Addendums (for demolished properties), and DOE Form revisions (July 26, 2012 letter), DOE forms (September 13, 2012 letter). A letter expressing MTA's intent to seek concurrence on an adverse effect finding for historic sites is being sent to the MHT with circulation of this Draft Section 4(f) Evaluation.
- Section 106 Consulting Parties: A summary of coordination with Section 106 consulting parties follows.
 - Designated consulting parties during the Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) phase in 2006 included the MHT, Baltimore City Commission for Historical & Architectural Preservation (CHAP), and Baltimore County Office of Planning (BCOP). Meetings were held with the

MHT (April 7, 2008) and CHAP (May 4, 2008) to provide a detailed overview of the project alignments, the cultural resources within the APE, and proposed additional investigations; BCOP chose not to participate. The MHT, CHAP, and BCOP were provided copies of submitted technical reports and invited to agency briefings.

- Additional consulting parties were identified in June 2009 (following the AA/DEIS) and also in September 2012 (as part of Final Environmental Impact Statement (FEIS) preparations): Baltimore Heritage, The Society for the Preservation of Federal Hill and Fell's Point, Anchorage Homeowners Association, Baltimore Harbor Watershed Association, Canton Community Association, Canton Cove Association, Canton Square Homeowners Association, Waterfront Coalition, US General Services Administration, Delaware Tribe of Indians, and Shawnee Tribe. A consulting party meeting was held on September 25, 2012 to share project information and listed/eligible historic properties within the APE identified. A second meeting was held on October 17, 2012 to provide an overview of potential effects, and to discuss potential avoidance, minimization and mitigation measures. Additional consulting party meetings are being planned to continue discussions on the effects, potential avoidance, minimization and mitigation measures, and the PA.
- Advisory Council on Historic Preservation: In a letter dated November 6, 2012, the FTA notified the ACHP of the finding of adverse effect on historic properties, in accordance with 36 CFR Part 800.6. The FTA also asked the ACHP to review information attached to the letter, to determine if the agency wishes to join the consultation process.
- Public: The public has an opportunity to review and comment on the Draft Section 4(f) Evaluation concurrently with the Red Line FEIS. Comments from the public related to the Section 4(f) analysis will be responded to in the Final Section 4(f) Evaluation, which will be included in the Record of Decision (ROD).

7. Evaluation of Alternatives

7.1 Introduction

The purpose of this chapter is to present a comparison of the Red Line Preferred Alternative to the No-Build Alternative. The effectiveness of the Preferred Alternative and No-Build Alternative in meeting the established purpose and needs for the project, as presented in **Chapter 1** of this Final Environmental Impact Statement (FEIS), is evaluated and summarized in a discussion on equity and trade-offs between the two alternatives. This chapter provides the basis for decision-makers and the public to assess the benefits and consequences of implementing the Red Line against the stated purpose and need for the project.

Updates to this Chapter since the AA/DEIS

This chapter has been updated to reflect the identification of the Preferred Alternative. The information presented in this chapter includes the updated and additional analysis presented in other chapters in this FEIS.

7.2 Project Purpose and Need

As presented in **Chapter 1** of this FEIS, the purpose and corresponding need for the project are summarized in **Table 7-1**.

Table 7-1: Project Purpose and Need

Purpose of the Project	Project Need
Improve transit efficiency by reducing travel times for transit trips in the project study corridor	Roadway congestion contributes to slow travel times for automobiles and buses in the project study corridor
Increase transit accessibility in the corridor by providing improved transit access to major employment and activity centers	Lack of convenient transit access to existing and future activity centers in the project study corridor, including downtown Baltimore, Fell's Point, and Canton, as well as employment areas in Baltimore County to the west of Baltimore
Provide transportation choices for east-west commuters in the project study corridor, by making transit a more attractive option	Lack of viable transit options for east-west commuters in the project study corridor
Enhance connections among existing transit routes in the project study corridor	Lack of connections from existing transit routes (including Central Light Rail, Metro, MARC, and bus network) to the I-70 travel market on the west side of the project study corridor, and to the I-95 and East Baltimore travel markets on the east
Support community revitalization and economic development opportunities in the project study corridor	Need for economic development and community revitalization in communities along the project study corridor, both in Baltimore County and in Baltimore City
Help the region improve air quality by increasing transit use, and promote environmental stewardship	Need to support the regional goal of improving air quality by providing alternatives to automobile usage

7.3 Effectiveness in Meeting the Project Purpose and Need

The effectiveness of the proposed project is the extent to which an alternative meets the purpose and needs that the proposed project is intended to address. The following section evaluates the effectiveness of the No-Build Alternative and the Preferred Alternative in meeting the identified purpose and need for the project.

7.3.1 Improve Transit Efficiency in the Corridor, by Reducing Travel Times for Transit Trips in the Corridor

The projected No-Build Alternative end-to-end transit travel time is 79 minutes. The Preferred Alternative would operate with an end-to-end transit travel time of 45 minutes, which would provide faster service than the No-Build Alternative. For example, current transit travel times during the peak-period on the US 40 Quick Bus between Edmondson Village and Baltimore Street and Charles Street intersection downtown is approximately 20 minutes. The same trip in 2035, according to the regional model, would take approximately 39 minutes under the No-Build Alternative, as a result of increased traffic congestion. With the Preferred Alternative, the transit travel time between Edmondson Village and the Inner Harbor Station at Charles and Lombard Streets would be 19 minutes.

The travel time savings of the Preferred Alternative over the No-Build Alternative would be achieved because the Preferred Alternative would operate in dedicated right-of-way, free from traffic congestion. As a result of increased reliability and convenience, the total transit trips would be greater for the Preferred Alternative (244,390 person-trips) than for the No-Build Alternative (225,980 person-trips), and dependency on congested roadways would be reduced. Refer to **Chapter 4, Table 4-3** for additional details.

7.3.2 Increase Transit Accessibility in the Corridor, by Providing Improved Transit Access to Major Employment and Activity Centers

The project study corridor is a major employment, entertainment, and educational destination from across the region, anchored by the Centers for Medicare & Medicaid Services (CMS) and the Social Security Administration on the west end, the University of Maryland, professional sports venues, Inner Harbor, and the central business district in the middle, and Johns Hopkins Bayview Medical Center campus on the east end of the corridor. There are approximately 7,500 businesses located within the project study corridor, employing over 192,000 people (BMC, 2002). The majority of businesses are small, with 20 or fewer employees, to medium sized, with 21 to 99 employees. However, while large businesses with over 100 employees only make up a small number of overall employers within the project study corridor, over 120,000 employees work at large businesses.

Under the No-Build Alternative, access to employment and activity centers would continue to be served by the bus network, with some planned and programmed transit improvements. Traffic congestion and slower travel speeds would result in longer commutes for transit passengers. The Preferred Alternative would improve access to jobs throughout the project study corridor and region by providing a more convenient and reliable transit service to employment centers, educational facilities, and activity centers, and by providing direct connections to the existing Central Light Rail, Metro, and MARC systems. (Refer to **Figure 7-1.**)

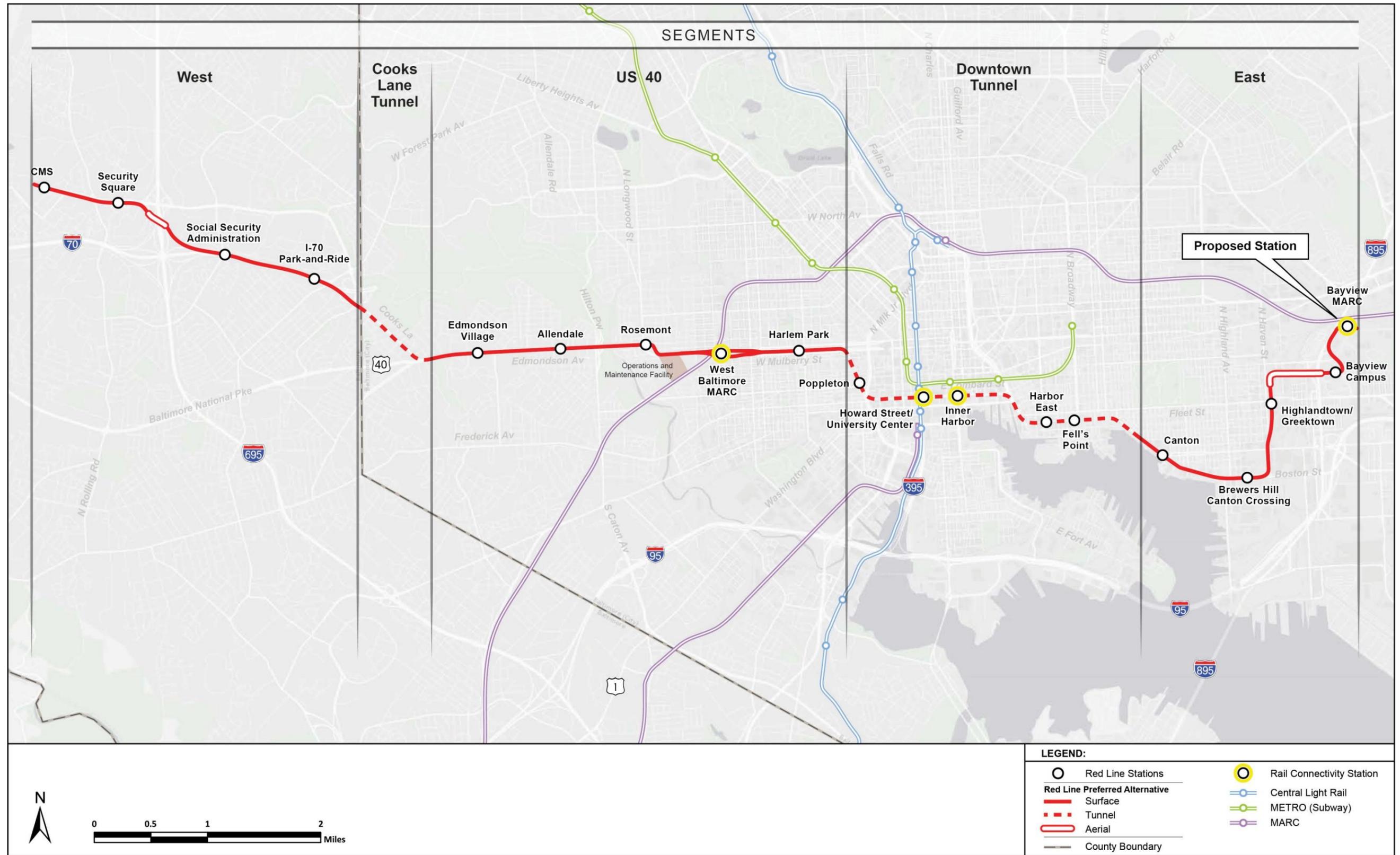


Figure 7-1: Preferred Alternative with Rail Connections

The Preferred Alternative would improve mobility and reduce commuting times in areas with the highest levels of employment in the Baltimore region. For example, current transit travel times during the peak-period on the Route 11 Local Bus between Canton Crossing and Charles Street and Redwood Street intersection downtown is approximately 21 minutes. The same trip in 2035, according to the regional model, would take approximately 36 minutes under the No-Build Alternative, as a result of increased traffic congestion. With the Preferred Alternative, the transit travel time between Canton Crossing and downtown at Charles and Lombard Streets would be 9 minutes.

In 2010, approximately 28 percent of the people residing in the project study corridor had no vehicle available or were transit-dependent. For these households, having reliable, fast transit service travel to and from jobs or other purpose could improve their quality of life. The Preferred Alternative would improve mobility and transit access to jobs and activity centers for these transit-dependent residents in the project study corridor.

7.3.3 Provide Transportation Choices for East-West Commuters in the Corridor, by Making Transit a More Attractive Option

The Preferred Alternative would provide faster transit service in the project study corridor over the No-Build Alternative. Under the No-Build Alternative, existing and future populations within the project study corridor would continue to be served by the local bus system, with some planned and programmed transit improvements.

The Preferred Alternative would improve the quality of east-west transit service in the project study corridor. A fixed transitway with dedicated right-of-way and separated from traffic would provide faster and more reliable service than bus service. Throughout the corridor, congestion on the roadways and highways affects the reliability of travel by automobile and bus. Light rail traveling in a dedicated right-of-way would not be subject to congested roadway conditions, resulting in dependable on-time service. The Preferred Alternative would operate with 7 minute headways during peak periods. The Preferred Alternative would also include stations, park-and-ride lots, pedestrian and bicycle improvements, and feeder bus service. These system elements would also contribute to enhancing the transit service and experience, thus expanding the ridership market with access to rail transit service.

The Preferred Alternative is expected to increase rail transit ridership. Compared to the No-Build Alternative, the regional travel demand model shows that the addition of the Preferred Alternative would increase transit rail ridership by over 28,900 trips per day. It is estimated that 18,170 person-trips would shift mode from auto to transit once the Preferred Alternative is operational, resulting in a reduction in highway trips in the region. Refer to **Chapter 4, Table 4-4**.

7.3.4 Enhance Connections Among Existing Transit Routes in the Corridor

Under the No-Build Alternative, enhancements to connections to existing transit routes in the project study corridor and throughout the region would be limited to the existing local bus system; therefore not meeting the project purpose and need. The Preferred Alternative would provide a critical “missing link” that connects the Metro, Central Light Rail, and MARC commuter trains with an east-west route. (Refer to **Figure 7-1**.) Riders on the Red Line would

have two access connections to MARC: direct and improved access at the West Baltimore MARC Station and a direct connection to the proposed Bayview MARC Station. The connection with MARC would allow easy access to Washington DC and growing job opportunities at Fort Meade and Aberdeen. The Red Line Howard Street/University Center Station would provide a direct connection to the existing Central Light Rail at Lombard and Howard Streets. Riders of the Red Line would have a direct underground connection to the Metro at the Charles Center Metro Station, and the Inner Harbor Red Line Station would be within walking distance of the Shot Tower/Market Place Metro Station. Also, the Preferred Alternative would enhance flexibility and increase mobility for bicyclists or pedestrians beyond the operating transit network and improve safety concerns of non-motorized travelers at signalized intersections. Refer to **Chapter 4, Section 4.1** for additional details on the public transportation system.

7.3.5 Support Community Revitalization and Economic Development Opportunities in the Corridor

Development is expected to occur in the project study corridor regardless of whether or not the Red Line is constructed. The No-Build Alternative would be inconsistent with adopted land use plans. Baltimore City and Baltimore County have been anticipating the Red Line and have structured area land use plans so that the benefits of the Red Line project would be maximized. In addition, the proposed development and growth anticipated in this corridor would likely continue to grow and place increased burden on the transportation network. Under the No-Build Alternative traffic congestion in the corridor is anticipated to increase.

Because of the predominantly urban environment in which the Preferred Alternative would be located, much of the corridor is developed and the type of land use is not expected to substantially change as a result of the Preferred Alternative. However, the intensity of the land use could change as a result of development occurring around the proposed stations. This redevelopment would be consistent with local plans, policies, and zoning, which were developed with the assumption that a major transit improvement would be made along the Red Line corridor. Both Baltimore County and Baltimore City support the proposed Red Line project and their plans indicate that the project is expected to (and would be encouraged to) attract new development at station areas. As an example, many of the station areas have been designated as transit-oriented development (TOD) on the draft zoning map, reflecting Baltimore City's interest in TOD at the Red Line stations. Refer to **Chapter 5, Section 5.2** for additional details.

The Preferred Alternative would support the vision of the *Baltimore City's Red Line Community Compact* and Baltimore County's land use and zoning plans of increasing access to transit; encouraging and accommodating growth in mixed-use, transit and pedestrian-oriented development; and developing and redeveloping vacant or underutilized parcels. The Preferred Alternative would be consistent with land use and related development goals identified in Baltimore City's 2006 *LIVE, EARN, PLAY, LEARN* Comprehensive Master Plan, which focuses on implementing policies and zoning changes that permit and reward development near existing and proposed transit stations. The City recognizes the Preferred Alternative as an important component of its land use and development strategy. Baltimore County's Master Plan, *Master Plan 2020*, also emphasizes sustainability and encourages development near transit stations. The Preferred Alternative would support redevelopment opportunities around the 19 stations

by enhancing access for residents and supplying a daily influx of transit riders and potential customers for businesses.

The Preferred Alternative could result in approximately 15,000 jobs during the construction of the Red Line. Regionally, the Preferred Alternative would provide economic benefits by improving transit access and mobility for the work force and consumers within the corridor. Job opportunities would fall into two categories: new jobs and better access to existing jobs. In public works construction projects of this magnitude, contractors may rely on the local labor pool to help build the project. Both skilled and unskilled labor would be necessary.

The construction of the Red Line would likely create job opportunities specifically for residents of the affected communities, as well as benefit local small or disadvantaged businesses. As summarized in the Red Line Community Compact, the planned Maryland Transit Administration (MTA) initiative to "put Baltimore to work on the Red Line" could lead to future employment and training opportunities for local area residents, as well as expanded opportunities for local disadvantaged businesses. Refer to **Chapter 5, Section 5.6** for additional details.

7.3.6 Help the Region Improve Air Quality by Increasing Transit Use and Promote Environmental Stewardship

The project study corridor encompasses both Baltimore City and Baltimore County. Baltimore City is classified as a maintenance area for carbon monoxide (CO), whereas Baltimore County is classified as attainment for CO. Both areas are classified as nonattainment areas for particulate matter (PM_{2.5}) and as serious nonattainment areas for Ozone (O₃). Ozone is a gas formed by the combination of nitrogen oxides, volatile organic compounds, and sunlight.

The Preferred Alternative would result in a decrease of vehicle miles traveled (VMTs), therefore resulting in fewer auto emissions, which would benefit the region's air quality. Refer to **Chapter 4, Table 4-18**. The Preferred Alternative is predicted to decrease regional pollutant burdens by approximately 1.5 to 1.9 percent. Refer to **Chapter 5, Table 5-26** for additional details. The Preferred Alternative would result in a daily reduction of 15,000 VMT in the project study corridor compared to the No-Build Alternative.

Overall, the No-Build Alternative would result in fewer impacts to transportation and environmental resources. However, the No-Build Alternative would not achieve the benefits of implementing the Red Line project in that it would not create jobs or encourage economic development and investment into the project study corridor. Also, the No-Build Alternative would result in an increase of approximately 77,000 daily vehicle miles traveled (VMT) in the region more than the Preferred Alternative, causing increased emissions, and therefore affecting the regional air quality conformity.

As shown in **Chapter 4**, the Preferred Alternative would benefit the regional transportation network as a whole by reducing delay and commuting times regardless of the mode. Under the Preferred Alternative, the type and quality of transit service in the project study corridor would be improved by adding a new light rail transit (LRT) line. A fixed transitway with dedicated right-of-way would provide faster and more reliable service than current bus service, which runs in mixed traffic. The Preferred Alternative would also provide park-and-ride facilities and bus

service that would expand the ridership market by providing access to the proposed Preferred Alternative service.

Building the Preferred Alternative would require changes to be made to a number of roadways along the proposed LRT alignment. This would allow for LRT to operate in an exclusive guideway and thereby provide a time advantage to transit vehicles. Besides reducing the number of traffic lanes, street patterns would be modified in a number of other ways, including: regulating new turn restrictions, closing some accesses, and removing or installing new traffic signals at several intersections along the alignment where the LRT crosses high-volume side streets.

Despite this reduction in capacity, it is anticipated that the total number of failing intersections (Level of Service [LOS] E or F) in 2035 under the Preferred Alternative are less than the 2035 No-Build conditions. This reduction would occur because of a number of factors:

- The reduction in traffic volumes along the Red Line corridor caused by diversions of auto trips to Red Line transit;
- Some failing unsignalized intersections in the No-Build condition would be converted to signalized intersection that would improve the overall LOS; and
- Some corridors would experience improved progression along the mainline because with the transit priority and preemption treatments provided for the rail line.

Additionally, several mitigation measures were proposed at various intersections that improved operations of the Preferred Alternative when compared with No-Build conditions. Some intersections were relocated, while a few were removed because of the at-grade crossing of the Red Line transit. Signal timing optimization for Red Line transit provided progression preference to the main line with heavy vehicular traffic when compared to lighter side street vehicular traffic and improved the overall intersection LOS.

Permanent, long-term impacts from the Preferred Alternative include: non-residential acquisitions and displacements, modified viewsheds, impacted park lands, adverse effects to historic resources, increased noise, forest and street tree impacts, effects to natural resources (including waters of the US, wetlands, critical area, floodplain, and groundwater), potential for hazardous materials, utility relocation, and others as detailed in **Chapter 5** and summarized in the **Table 7-2**.

During planning and preliminary design, opportunities to avoid and minimize effects to environmental resources were actively pursued. Overall, the project effects were reduced by locating segments of the Preferred Alternative within tunnel sections or within transportation right-of-way. As the project continues into Final Design, additional avoidance and minimization measures would be pursued for impacts identified in this document. Any unavoidable effects would be mitigated for in accordance with the regulations governing that resource and commitments in this document. A summary of the commitments and mitigation is included in the last section of **Chapters 4** and **5** of the FEIS.

Table 7-2: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Land Use</i>
<ul style="list-style-type: none"> Minimal because the current land use plans and zoning for Baltimore County and Baltimore City have been developed to anticipate the Red Line project, and to maximize the potential benefits from the project.
<i>Neighborhoods and Community Facilities</i>
<ul style="list-style-type: none"> No displacement of community facilities such as schools, libraries, places of worship, emergency services, or park and recreation areas. Neighborhood cohesion effects are not anticipated because the proposed transit service would operate almost entirely on existing roadways and thoroughfares. Greater pedestrian activity and would provide improved accessibility for pedestrians and bicyclists.
<i>Parking</i>
<ul style="list-style-type: none"> Permanent elimination of 741 parking spaces, and would provide 1,134 new parking spaces at park-and-ride facilities. 380 spaces that would be permanently displaced by the project and that could not be accommodated nearby.
<i>Environmental Justice</i>
<ul style="list-style-type: none"> No disproportionately high and adverse impact on environmental justice (EJ) populations.
<i>Property Acquisitions and Displacements</i>
<ul style="list-style-type: none"> No acquisition of real property that would result in an involuntary residential displacement An estimated 192 properties would require either a partial (169 of 192) or total (23 of 192) right-of-way acquisition totaling approximately 42 acres. The majority of the partial acquisitions are within the US 40 segment, where sliver takes from 97 residential properties would be required. The 23 total takes include 13 commercial, three industrial, one institutional, and six governmental properties, primarily at the operations and maintenance facility (OMF).
<i>Economic Activity</i>
<ul style="list-style-type: none"> Regional economic benefits by improving transit access and mobility for the work force and consumers within the project study corridor. Better access to existing jobs. Creation of approximately 200 permanent MTA jobs.
<i>Visual and Aesthetic Resources</i>
<ul style="list-style-type: none"> New visual features introduced; of 16 visual districts or sub-districts identified throughout the project study corridor, an overall visual effect of "high" on one sub-district, and an overall visual effect of "medium to high" on five sub-districts

Table 7-2: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Parks, Recreation and Open Space</i>
<ul style="list-style-type: none"> • Long-term effects to park, recreation and open space areas are limited and include: <ul style="list-style-type: none"> ○ Chadwick Elementary School – 0.7 acre of the property would be required for construction of and access to a proposed traction power substation (TPSS); ○ Edmondson-Westside High School – approximately 150 square feet of school property near the Edmondson Avenue and Athol Avenue intersection would be purchased in fee simple to accommodate intersection improvements and stormwater management; ○ Boston Street Pier Park – a fee-simple area of less than 0.1 acre would be required from this park to accommodate stormwater management; ○ St. Casimir’s Park – a fee-simple area of less than 0.1 acre would be required to accommodate stormwater management.
<i>Historic Properties</i>
<ul style="list-style-type: none"> • Proposed effects findings include: <ul style="list-style-type: none"> ○ no effect on 45 individual historic properties; ○ no adverse effect on 28 individual historic properties; and ○ an adverse effect on five individual historic properties, all located in Baltimore City: Poppleton Fire Station (Engine House No. 38), Business and Government Historic District, South Central Avenue Historic District, Fell’s Point Historic District, and Public School No. 25 (Captain Henry Fleete School). • An overall finding of adverse effect on historic properties has been proposed.
<i>Archeological Resources</i>
<ul style="list-style-type: none"> • The archeological analysis completed to date has identified 22 areas of sensitivity. Any potential archeological resources that would be affected would be documented prior to construction and once operational, no further effects to archeological resources are anticipated.
<i>Air Quality</i>
<ul style="list-style-type: none"> • Predicted to decrease regional pollutant burdens by approximately 1.5 to 1.9 percent. • No violations of the NAAQS are predicted • Not considered a project of air quality concern regarding PM_{2.5} emissions.
<i>Noise and Vibration</i>
<ul style="list-style-type: none"> • Corridor-wide project noise exposure levels are predicted to exceed the FTA moderate impact criteria at 96 residences and the FTA severe impact criteria at one residence (The Shipyard condominium building at the corner of Boston Street and Lakewood Avenue). • Vibration levels are predicted to exceed the FTA frequent criterion of 72 VdB at 45 residences. Ground-borne noise levels are predicted to exceed the FTA frequent criterion of 35 dBA at 49 residences. • Vibration levels are not predicted to exceed the FTA frequent impact criteria at non-residential land-uses (Category 1 or 3) except the proposed University of Maryland Proton Building.

Table 7-2: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Ecological Resources (terrestrial habitat, terrestrial wildlife, aquatic habitat/species, and rare, threatened and endangered species)</i>
<ul style="list-style-type: none"> • Impacts to 34.8 acres of forests with minimal effects to higher value terrestrial habitat. • Long-term effects to terrestrial wildlife resources are unlikely because on existing roadway alignments, and wildlife corridors, such as along Gwynns Falls, would remain intact. • FIDS habitat would be affected by minor encroachment since only slight widening of existing roadways would be necessary. • Permanent or temporary loss of approximately 1,941 linear feet of aquatic stream habitat, largely as a result of proposed culvert extensions. • Greater impervious surfaces could affect water quality. However, overall net increases in impervious surfaces are expected to be minimal, amounting to an approximately 7-acre increase in impervious area. Incremental impervious effects that could be expected are unlikely to affect overall aquatic habitat or the makeup of biological communities to an appreciable degree. • Long-term effects to rare, threatened, and endangered species would not be anticipated since none are known to occur within the project study corridor.
<i>Forests</i>
<ul style="list-style-type: none"> • Impacts to 34.8 acres of forest and removal of 39 specimen trees. • The majority of the long-term forest effects would occur within the West and Cooks Lane Tunnel segments (28.5 acres) in the western reaches of the project study corridor, where most of the resources exist.
<i>Street Trees/ Individual Trees</i>
<ul style="list-style-type: none"> • Impacts to 315 street trees within Baltimore County and 948 in Baltimore City.
<i>Chesapeake Bay Critical Area</i>
<ul style="list-style-type: none"> • Conversion of 1.28 acres of unpaved area to impervious surfaces would occur in the East segment from the construction of the Canton Station and expansion of roadway to accommodate the track in the current median of Boston Street (including within the 100-foot buffer at Harris Creek). • The impervious area within the Critical Area would increase from 56 percent cover (existing conditions) to approximately 61 percent cover. • Long-term vegetation effects would occur to landscaping plants, street trees, and park trees within the Critical Area in both the Downtown Tunnel and East segments. The Downtown Tunnel segment tree effects would total 149. The East segment tree effects would total 232, with nine additional trees affected within the 100-foot buffer.

Table 7-2: Summary of Preferred Alternative Long-Term Effects

Summary of Preferred Alternative Long-Term Effects
<i>Wetlands and Waters of the United States</i>
<ul style="list-style-type: none"> • Total effects to wetlands and waterways: <ul style="list-style-type: none"> ○ 0.23 acre of palustrine forested wetlands ○ 0.99 acre palustrine emergent wetlands ○ 1,941 linear feet of perennial and intermittent streams ○ 324 linear feet of ephemeral channel. • MTA intends to apply for a Section 404 Individual Permit from the US Army Corps of Engineers (USACE) and an Individual Non-tidal Wetlands and Waterways Permit from the MDE.
<i>Surface Waters: Water Quality, Scenic and Wild Rivers, Floodplains and Navigable Waterways</i>
<ul style="list-style-type: none"> • Net impervious increase of approximately 7 acres. • No designated scenic and wild rivers within the project study corridor; therefore, no long- or short-term effects would occur. • 0.7 acre of nontidal and 1.0 acre of tidal floodplain effects (combined long- and short-term). In general, the majority of the floodplain encroachments would be from traverse crossings of floodplains. • No long- or short-term effects to navigable waters are anticipated. While no effects to the Jones Falls are anticipated because of the tunnel, would require authorization under Section 10 of the Rivers and Harbors Act. The Downtown Tunnel segment passes beneath this navigable water and is therefore subject to USACE (and potentially USCG) navigable waters permitting requirements.
<i>Groundwater</i>
<ul style="list-style-type: none"> • Runoff would be directed to surface waters through stormwater management or treated as it is being infiltrated into the local groundwater through ESD stormwater facilities.
<i>Soils and Geology</i>
<ul style="list-style-type: none"> • Once operational, no long-term effects to the underlying soils and rock would be anticipated.
<i>Hazardous Materials</i>
<ul style="list-style-type: none"> • There is a potential for the presence of hazardous materials to be encountered
<i>Utilities</i>
<ul style="list-style-type: none"> • Utility-related effects would be addressed in advance of, or in conjunction with construction.
<i>Draft Section 4(f) Evaluation</i>
<ul style="list-style-type: none"> • The temporary occupancy of three parklands and one historic property during construction; • De minimis impacts to two parklands and nine historic properties; and • The permanent use of two contributing properties within the Business and Government Historic District under the proposed Inner Harbor Station.

It is anticipated that numerous federal, state, and local permits and approvals would be required during the design and construction phases of the project. Permits and approvals are typically obtained as the project design and limit of disturbance are further refined, including implementing avoidance and minimization design measures and finalizing the construction staging and access areas. A list of the anticipated permits and approval assumed for the Preferred Alternative are discussed in **Chapter 5, Section 5.26**.

7.4 Equity

Equity is the extent to which each alternative provides fair distribution of benefits, costs, and impacts across communities in the project study corridor. The benefits of land use, access, mobility, job creation, and environmental mitigation would be realized by residents throughout the project study corridor, while some adverse impacts would occur to those same communities. The Preferred Alternative would improve access and mobility within the project study corridor, thereby improving access to jobs, educational facilities, and cultural/entertainment venues. The project would be funded by a combination of federal, state, and local funds. Because a broad range of funding sources would be used, it is expected that the financial burden of the proposed project would be widely shared.

Overall, the Red Line would improve accessibility for all communities including low-income, minority, and transit-dependent populations. While some impacts would occur within these communities, these impacts would be minimal compared to the project's benefits to the larger environmental justice populations, and would be no different than impacts to the overall population in the corridor, including accessibility and a faster, more reliable mode of transit.

8. Public Participation and Agency Outreach

8.1 Public Involvement Overview

The Red Line project's comprehensive public involvement program, which began in Spring 2003, has been integral to the overall project efforts and has continued throughout the planning and design phases of the project. The initial public involvement plan has evolved and the implementation of the plan has continued to inform and engage area residents, communities, businesses, and other organizations. It is updated as appropriate as the Maryland Transit Administration (MTA) continues to develop the project and respond to comments on the Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS). Many of the early programs are still in place while new programs and techniques have been added to expand the reach of outreach and engagement activities. Outreach to the public is vital to the successful implementation of the Red Line and is a necessary component of some federal regulations.

The MTA launched several new programs for involving communities, following the execution of the *2008 Baltimore City Red Line Community Compact*¹, including the Station Area Advisory Committee (SAAC) program and the hiring of Community Liaisons to facilitate dialogue with stakeholders at the grassroots level. These new programs are in addition to the continuation of various other public involvement activities, described below.

This chapter provides an overview of activities that have occurred since the AA/DEIS was published in 2008. Red Line public involvement activities during this phase have included: public hearings, open houses, Citizens' Advisory Council (CAC) and SAAC meetings, community events, small group meetings, and the distribution of various project publications. In addition, non-traditional targeted outreach efforts which included grocery store outreach, door-to-door canvassing, ministerial outreach, transit center outreach, and social media campaigns were employed to provide a comprehensive program to reach stakeholders and more specifically traditionally underserved populations such as minority, low-income, elderly, and disabled populations. For more information, please refer to the *Public Involvement Technical Report (Appendix I)*.

Changes to this Chapter since the AA/DEIS

As noted above, a wide range of public outreach and involvement activities continue to be carried out since the publication of the AA/DEIS. This chapter of the Final Environmental Impact Statement (FEIS) focuses on the activities since the AA/DEIS. For information on public involvement activities carried out prior to the AA/DEIS, please refer to the AA/DEIS document (*Appendix D*).

8.2 Outreach Plan

The MTA participates in various public outreach activities to increase awareness of the project throughout the Baltimore region, provide up-to-date project information, as well as create relationships, opportunities, and connections to sustain project outreach and feedback. These

¹ The Compact, signed in September 2008, is an agreement among the communities along the project study corridor, Baltimore City, the MTA, and other project stakeholders to make the Red Line a catalyst for economic and environmental benefits in the project's neighborhoods.

events, meetings, and get-togethers were also held to develop a greater understanding of, and appreciation for, the neighborhoods that the Red Line would serve. Since the AA/DEIS Public Hearings, approximately 240 outreach events have been held with the stakeholders along the project study corridor.

The sections below describe outreach activities targeted to neighborhoods, as well as to the project study corridor and the larger region. Agency coordination and outreach is discussed in **Section 8.3** while public involvement and CAC meetings are discussed separately in **Sections 8.4** and **8.5**.

8.2.1 Project Publications

Since the AA/DEIS, MTA developed three newsletter publications, dated Fall 2009, Summer 2011, and Spring 2012. The Fall 2009 issue focused on Governor Martin O'Malley's announcement of the Locally Preferred Alternative (LPA), while the Summer 2011 issue discussed the project's entry into the Preliminary Engineering phase. The Spring 2012 issue announced the June 2012 Open House meetings and refinements to the LPA.

Regular (monthly/bi-monthly) e-newsletters continue to be distributed to subscribers to the project's email registry. The e-news provides more frequent updates on the project and notifies the community regarding upcoming events.

8.2.2 Resource Hubs

MTA identified 36 locations throughout the project study corridor for the placement of Red Line information. These locations include community recreation centers, libraries, schools, senior centers, and state buildings. These facilities are easily accessible by the public and were established to provide project information including fact sheets (Red Line general information and SAAC updates), meeting fliers, newsletters, public meeting announcements, mailing list sign-up cards, and other publications specific to the community. Where appropriate, information is provided in both English and Spanish.

8.2.3 Media Outreach

A variety of media outlets have been utilized to inform stakeholders. Advertisements were placed in a total of 14 local English and Spanish language newspapers and other publications announcing corridor-wide public meetings. Local television and radio stations were also utilized as a way to keep the public informed about upcoming Red Line meetings and other events.

8.2.4 Station Area Advisory Committees

In Fall 2010, MTA initiated the SAACs, a community-based design initiative to provide design input on the Red Line project development. The SAACs were formed to fulfill a commitment for community-centered station design, development, and stewardship that had been set forth in the *2008 Baltimore City Red Line Community Compact*.

Seventeen SAACs were formed to provide input into the planning and design of the nineteen proposed light rail stations along the project study corridor. Over the course of approximately 18 months, the SAACs met with facilitation teams and local government representatives to

discuss and summarize ideas and concepts pertaining to the Red Line and the stations within their communities.

During the first phase of this process, the SAACs developed Vision Plans for their station areas focusing on areas broader than the project scope which would be influenced by, and would influence, the Red Line project and the stations. This information was presented at the May 2011 Open House meetings.

In the second phase, the SAAC members were asked to give input into three “focus areas” associated with their stations:

- 1) The station
- 2) Areas around the station
- 3) The transit corridor (between stations)

The results of this effort were the development of Design Concepts by the SAACs for each station that provided input on landscape, lighting, furnishings, artwork, sustainability, and station design (typical shelter design and entrances). This input was presented at the Summer 2012 Open House meetings.

The SAACs were helpful in providing valuable information about their communities and on how each proposed station would function in the community. The SAACs’ work products are available on the project website (www.baltimoredline.com), and were used to relay public comments to the project designers.

8.2.5 Community Liaisons

Designated by MTA to work with the communities, the Red Line Community Liaisons play a key role in MTA’s efforts to enhance awareness of the project and engage the surrounding neighborhoods. The Community Liaisons work closely with residents, businesses, community organizations, and other stakeholders, and serve as liaisons between the MTA and communities. They work with diverse communities to ensure concerns are documented and submitted to the MTA for consideration into the project. Integrating the Community Liaisons into the Red Line project fulfills one of the goals outlined in the *2008 Baltimore City Red Line Community Compact*. Outreach efforts for this project have extended to numerous communities including minority, low-income, elderly and disabled throughout the project study corridor. Some examples of the outreach efforts include:

- Developed project materials for a Limited English Proficiency (LEP) audience;
- Some printed project materials were translated into Spanish;
- The text on the project website can be translated into more than 60 various languages; and
- One of the Resource Hubs (described in **Section 8.2.2** above) is located at Baltimore City’s mixed population [nearly elderly (50+), elderly (62+) or disabled] residential facility, Rosemont Tower.

The five Community Liaisons, listed in **Table 8-1** have organized presentations, community events, business outreach, and other outreach efforts throughout the project study corridor.

8.2.6 Business and Stakeholder Meetings and Outreach

The MTA meets with businesses, special interest groups, and governmental agencies in an effort to provide project updates, as well as solicit comments. As new project details and updates become available, meetings are scheduled with these entities and coordinated through the Community Liaison staff.

Table 8-1: Community Liaisons

Name	Liaison Coverage Area	Station Areas Represented
Keisha Trent	West Segment	<ul style="list-style-type: none"> • Centers for Medicare & Medicaid Services (CMS) • Security Square • Social Security Administration • I-70 Park-and-Ride
Charisse Lue	Cooks Lane Segment	<ul style="list-style-type: none"> • Edmondson Village • Allendale • Rosemont • West Baltimore MARC
Lisa Akchin	US 40 Segment	<ul style="list-style-type: none"> • Harlem Park • Poppleton • Howard Street/University Center • Inner Harbor
Rachel Myrowitz	Downtown Tunnel Segment	<ul style="list-style-type: none"> • Harbor East • Fell's Point • Canton
John Enny	East Segment	<ul style="list-style-type: none"> • Brewers Hill/Canton Crossing • Highlandtown/Greektown • Bayview Campus • Bayview MARC

Source: *Public Involvement Technical Report, 2012*

8.2.7 Speaker's Bureau/Community Liaison Presentations

The Red Line "Speaker's Bureau" was created prior to the AA/DEIS to establish and maintain open communication with residents within the study area, and to give communities the opportunity to discuss how their community would be affected by the proposed Red Line project. Since the launch of the Community Liaisons program, these presentations to community associations are now referred to as Community Liaison presentations. They are typically held in an informal, small-group setting to encourage interaction. More than 80 presentations have been made since the AA/DEIS was published.

8.2.8 Festival and Event Outreach

During 2011, MTA attended 28 festivals and other summer events, and dedicated 415 hours to outreach and related preparation. The 2011 summer events ranged from small, community-based festivals, farmers' markets, and neighborhood block parties such as the St. Anthony's Festival and the Baltimore International College Block Party, to large regional events such as Artscape and the Maryland State Fair.

Many of the summer festival events are well established and well attended. Close to 3,660 people visited a Red Line booth or table, and more than 2,300 people added their names to the project mailing list. The summer events proved to be an effective way to connect with people who reside both inside and outside of the Red Line project study corridor. Participants discussed the project timeline, the LPA, cost estimates, economic development opportunities in the project area, and other project topics.

In 2012, MTA outreach efforts continued by participating in 26 canvassing/literature distribution events; 115 community events/festivals including displays at various farmer's markets, LatinoFest, Earth Day, Charm City Music Festival, National Night Out, Artscape and the Islamic Society of Baltimore Summerfest; 37 networking events; 57 community presentations with various community and business associations and 31 single stakeholder meetings. The audience for these groups ranged from single stakeholder to larger regional events.

8.2.9 Project Website

The Red Line project website (www.baltimoreredline.com) provides up-to-date information on the project and announces any upcoming meetings and events. The website includes downloadable materials, including a map and simulation of the Preferred Alternative, photos, fliers, e-newsletters, news articles, brochures, and various archived materials. Four project videos are also available on the website and include: the Red Line promotional video, produced in 2007; "Ride the Red Line," produced in 2009, depicting the downtown segment of the project; "Red Line West Side Story," produced in 2010; and the "East Side" video, produced in 2011, and the Red Line 2012 Preferred Alternative end-to-end video. Community members can also submit questions or comments through the website. The site also includes links to Twitter, Facebook and YouTube.

LEP considerations were also made in developing the project website. To reach various populations, website text can be translated into more than 60 languages. Also available on the website are topic-specific materials for further clarification, which include flyers and information sheets that have been translated to reach LEP stakeholders. The flyers and fact sheets are available in both English and Spanish to provide community members an overview of the project and include a comment card to fill out and signup for the project mailing list.

8.2.10 Hispanic Outreach

Focused outreach to Spanish speaking populations has been included as part of many of the outreach strategies and tools discussed above. The MTA has continued its relationship with advocacy organizations such as Education Based Latino Outreach Center (EBLO) and the Latino Providers Network to reach and engage the Hispanic community; as such Community Liaison presentations were also given during the development of the FEIS to provide up-to-date information and to receive feedback. In addition, the Community Liaisons also canvassed businesses and residential dwellings in the "Spanishtown" area of the Upper Fell's Point neighborhood (along Broadway, Eastern Avenue, Fleet Street) and in the Highlandtown neighborhood (along Eastern Avenue) to provide stakeholders with Red Line project fact sheets, newsletters and event invitations/announcements in both English and Spanish.

The Red Line project materials were also translated into Spanish and provided to the community at EBLO, Esperanza Center and the Southeast Anchor Pratt Library. In addition the FEIS **Executive Summary** was translated into Spanish as well as e-newsletter editions, frequently asked questions document, various fact sheets, and other pertinent project materials as needed.

The Community Liaisons also attended ethnic festivals and events known to reach Hispanic populations which included Latino Fest, Cinco de Mayo, Fell's Point Fun Festival, Highlandtown Farmer's Market, and the Hispanic Heritage Celebration.

8.2.11 Social Media

Social media tools including Facebook, Twitter and YouTube were established for the Red Line project and have played an integral role in quickly disseminating information to the public about the project. Since the creation of a Red Line themed fan page in 2011, the Baltimore Red Line Community Liaisons Facebook Fan Page (www.facebook.com/redlineliaisons) has earned 181 "Likes." The Community Liaisons regularly provide posts that emphasize project updates, outreach opportunities, and news relevant to the communities along the corridor. The Red Line Facebook page also occasionally highlights news from the transit and transportation industry. The Red Line project also maintains a Twitter account (@redlineliaisons) with approximately 60 followers. The Twitter account is linked to the Red Line Facebook page and, as such, typically contains similar content.

In addition to the Facebook and Twitter accounts, the Red Line project also maintains a YouTube page (www.youtube.com/redlineliaisons). Twelve videos about the project and events have been posted since its creation. There are many YouTube subscribers that follow Red Line updates and over 4,400 views of project-related videos have occurred.

All of the social media outlets can be found on each of their respective platforms as well as on the Red Line website (www.baltimoreredline.com). The project website has been optimized for mobile viewing on handheld devices.

8.2.12 High School Internship Program

The MTA created a high school internship program in 2009 with its first class of six students; since then the MTA has expanded its partnership to include three of the high schools located along the project study corridor: Woodlawn High School, Edmondson-Westside High School, and Patterson High School.

Each year up to 18 new high school students are selected by the MTA to work at three firms for 6 weeks in the summer. The program exposes the interns to the Red Line project, the MTA staff and facilities, as well as to careers in transportation and planning. Additionally, three college students from Morgan State University are selected each year to serve as college assistants to the program as they help to facilitate the daily activities of the program and serve as mentors to the high school interns. As mentors, the college assistants provide guidance to the interns in planning for future goals such as college and careers.

8.3 Agency Coordination

The Red Line project is being developed in accordance with the National Environmental Policy Act (NEPA) and the Maryland Streamlined Environmental and Regulatory Process, including coordination with federal, state, and local regulatory agencies. Outreach to these agencies has primarily been through regular, Interagency Review Meetings and correspondence, and coordination will continue (**Appendix G**).

The resource agencies that attend the Interagency Review Meetings typically include:

- Federal Highway Administration
- Federal Transit Administration
- US Army Corps of Engineers
- US Environmental Protection Agency
- US Fish and Wildlife Service
- National Park Service
- Maryland State Highway Administration
- Maryland Transit Administration
- Maryland Department of the Environment
- Maryland Historical Trust/Maryland State Historic Preservation Office
- Maryland Department of Planning
- Maryland Department of Natural Resources
- Baltimore Regional Transportation Board, the Metropolitan Planning Organization (MPO) for the region

Table 8-2 provides the dates and themes of the nine Interagency Review Meetings that have been held since the AA/DEIS.

Table 8-2: Interagency Coordination Meetings

Meeting Date	Topic of Discussion
November 18, 2009	Presented results of the AA/DEIS
December 15, 2010	Presented the Locally Preferred Alternative and schedule
November 16, 2011	Presented the Preferred Alternative and path forward for the FEIS
December 14, 2011	General project update and introduction of technical studies
March 21, 2012	Tunnel overview and Phase 1B archeology
April 18, 2012	Natural resource studies – approach, methodology, and status
May 16, 2012	Noise Studies – approach, methodology, and status
September 19, 2012	Natural resource studies – conceptual mitigation and; Air Quality
October 17, 2012	Cultural and Historic Resources

Source: *Public Involvement Technical Report, 2012*

The FTA and MTA have conducted numerous cultural resource studies along the project study corridor pursuant to the assessment of impacts to historic architectural, archaeological, and cultural resources required under NEPA, as amended (42 United States Code [USC] 4321-4347), Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470 et Seq.), and Section 4(f) of the Department of Transportation Act of 1996, as amended (49 USC Section 303). These studies were performed in consultation with the staff of the Maryland Historical Trust, representing the Maryland State Historic Preservation Officer and other appropriate consulting parties.

In August 2011, the President issued a memorandum entitled *Speeding Infrastructure Development Through More Efficient and Effective Permitting and Environmental Reviews*, which required federal agencies to identify and expedite a set of priority projects. In October 2011, the Red Line project was selected as one of 14 infrastructure projects around the country for an expedited permitting and environmental review process.

To encourage transparency during the project development process, the Federal Infrastructure Projects Dashboard allows the public to track the progress of each priority project. The dashboard, which is part of the government's performance.gov website, highlights best practices and successful coordination efforts that result in an efficient federal permitting process and review decisions which can benefit all projects. The performance.gov website informs the public of actions that require cooperation between federal agencies for the Red Line project. It summarizes the substantial public involvement and outreach activities to refine and improve the project.

8.4 Public Involvement Meetings

Numerous public meetings and workshops have been held since the publication of the AA/DEIS, including public hearings, open houses, SAAC meetings, and CAC meetings. These public meetings are summarized in the following sections.

8.4.1 Corridor-Wide Public Meetings

a. Public Hearings

Four public hearings were held in November 2008. These meetings served as a formal opportunity for the public to provide comments on the AA/DEIS, in accordance with NEPA and Section 106 of the National Historic Preservation Act. The AA/DEIS presented the project's purpose and need, an alternatives analysis, the affected natural and human environments, possible impacts, and potential mitigation for the build alternatives. Approximately 500 people attended the four meetings listed in **Table 8-3**, with 159 citizens providing testimony either during the hearing or privately with a court reporter. Written comments were also accepted at these hearings. Overall, more than 500 comments and several petitions received during the comment period.

Table 8-3: Fall 2008 Public Hearing Dates and Locations

Date	Meeting Location	Project Area Location
November 6, 2008	Lithuanian Hall	Downtown
November 8, 2008	Edmondson High School	West Baltimore
November 12, 2008	United Autoworkers Hall	East Baltimore
November 13, 2008	Woodlawn High School	Baltimore County

Source: Public Involvement Technical Report, 2012

b. Spring 2011 Public Open House Meetings

As noted in **Table 8-4**, four open house meetings occurred in May 2011. The purpose of the 2011 open house meetings was to highlight the work of the SAACs. The SAACs were comprised of community stakeholders and met regularly to provide input on how stations along the proposed Red Line could be designed to best serve their communities. At each of the open house meetings, SAAC members shared their work with the public and received input on the development of Vision Plans and other work products. More than 400 neighborhood residents attended to gather information, ask questions, and offer their input on the station design concepts presented by the SAACs.

Table 8-4: Spring 2011 Public Open House Meetings

Date	Location	Project Area Location
May 7, 2011	Edmondson High School	West Baltimore
May 11, 2011	Woodlawn High School	Baltimore County
May 14, 2011	Hampstead Hill Academy	East Baltimore
May 17, 2011	University of Maryland-Baltimore	Downtown

Source: Public Involvement Technical Report, 2012

c. Summer 2012 Public Open House Meetings

The purpose of the Summer 2012 open house meetings was to present the latest information on the project including the refinements that were made to the LPA as a result of further preliminary design and comments made on the AA/DEIS, as well as an update on the efforts of the SAACs. Approximately 380 people attended these four meetings held in June 2012 to learn about the project. To date, 65 comment cards have been received. Additionally, information on related area-specific projects, such as the West Baltimore MARC and Bayview MARC projects, and the Edmondson Avenue Bridge Project, were available at the Open House held in those specific areas of the project study corridor. The specific meeting locations are listed in **Table 8-5**.

Table 8-5: Summer 2012 Public Open House Meetings

Date	Location	Project Area Location
June 6, 2012	University of Maryland-Baltimore	Downtown
June 9, 2012	Hampstead Hill Academy	East Baltimore
June 12, 2012	Woodlawn High School	Baltimore County
June 16, 2012	Lockerman Bundy Elementary School	West Baltimore

Source: Public Involvement Technical Report, 2012

8.4.2 SAAC Meetings

As noted above, the SAAC meetings revolved around two phases: developing a Vision Plan for their respective station area(s), and providing specific design input. At the end of each phase of the SAAC efforts, Open Houses were held to provide an opportunity for the public to submit feedback on the Vision Plans, station locations, and focus areas. Information on SAAC meetings and events are described below.

a. SAAC Meetings

The SAAC members held regular meetings every 6 to 8 weeks from January 2011 through June 2012, when the formal 18-month program concluded. However, it is anticipated that coordination with SAAC members will continue until the end of the station planning process with a less rigorous meeting schedule.

b. SAAC Events

In an effort to provide information to the SAAC members on various topics, four special events were held:

- 1) New Links-Baltimore Seminar – that was designed to foster collaboration and provide station-area planning assistance.
- 2) Columbia Heights Walking Tour – that provided examples of development and enhancements that can be achieved in communities undergoing transit investment.
- 3) The RailVolution Conference – attendance at this event enabled participants to see examples of case studies from across the country in topics ranging from Transit Oriented Development (TOD) to bike sharing.
- 4) Philadelphia Light Rail Tour – that provided examples of TOD around surface and underground stations similar to what is proposed at the Howard Street/University Center station.
- 5) SAAC Celebration – was an event to honor the contributions of its members for the completion of the Red Line station planning process.

In addition, two special SAAC meetings were held to discuss critical design elements with the public:

- The I-70 SAAC Meeting – held to discuss existing conditions in the I-70 area, proposed concepts for the Red Line alignment and I-70 Park-and-Ride Station (including potential roadway modifications), and to solicit comments from the community.
- Operations and Maintenance Facility (OMF) Meeting – held to provide information regarding the planned Calverton light rail operations and maintenance facility to be located south of US 40 (West Franklin Street) at North Franklinton Road. This meeting was also advertised to the surrounding residences and communities near the OMF.

8.5 Citizens' Advisory Council

In 2006, the Maryland General Assembly passed a bill creating the Red Line CAC. The bill established the membership of the CAC and its role in the Red Line planning process. The CAC is responsible for advising the MTA on impacts, opportunities, and community concerns regarding the Red Line. The CAC's functions include:

- Advising the MTA on potential neighborhood impacts resulting from the Red Line project
- Providing input to the MTA as the project advances through the planning, engineering, right-of-way acquisition, and construction phases
- Reviewing economic development opportunities associated with the project

The CAC continued to meet monthly through 2012 to review numerous topics of importance to the planning and development of the Red Line. All of the CAC meetings have been open to the general public. The CAC will continue to work with MTA as the project moves towards implementation.

A brief overview of the topics discussed at the CAC meetings held between 2009 and September 2012 are listed in **Table 8-6**. For more detailed information regarding the CAC Retreats and other information related to the CAC, please review the Appendices of the *Public Involvement Technical Report*.

Table 8-6: CAC Meetings and Topics

Meeting Date	Major Topics
January 8, 2009	<ul style="list-style-type: none"> • Review of public comments • CAC role and strategies for working with community leaders • Economic scan
February 12, 2009	<ul style="list-style-type: none"> • Update on State Center Transit Project and Neighborhood Alliance • Federal economic recovery plan; implications for Red Line • CAC role and strategies for working with community leaders
March 12, 2009	<ul style="list-style-type: none"> • Analysis of CAC modifications to Alternative 4C • Update on Southeast Baltimore alignment options • Update on Red Line project milestones/schedule • Where Do We Go From Here; subcommittee report
April 2, 2009	<ul style="list-style-type: none"> • Analysis of CAC modifications to Alternative 4C (West Side) • Summary of DEIS comments • Subcommittee report
May 14, 2009	<ul style="list-style-type: none"> • Baltimore City land bank • Summary of DEIS comments • Selection of LPA • Subcommittee report
June 11, 2009	<ul style="list-style-type: none"> • Edmondson Avenue traffic capacity • West Baltimore MARC station update • CAC annual report • R. Keith downtown alternative • CAC bus tour

Table 8-6: CAC Meetings and Topics

Meeting Date	Major Topics
July 9, 2009	<ul style="list-style-type: none"> • R. Keith downtown alternative • Discussion of council vote on Alternative 4C • Proposed Red Line stations • CAC annual report
September 10, 2009	<ul style="list-style-type: none"> • Selected LPA • CAC annual report • Bylaw amendments
October 8, 2009	<ul style="list-style-type: none"> • Bylaw amendments • CAC annual report • Project schedule • Community compact
November 12, 2009	<ul style="list-style-type: none"> • CAC annual report • By-law amendments • Comparison of Alternative 4C LPA
January 14, 2010	<ul style="list-style-type: none"> • Implications of proposed changes to the FTA New Starts program • Planning for safety and security
March 11, 2010	<ul style="list-style-type: none"> • Red Line economic impact study • Transit safety and accident data • Station area planning process • Minimum operating segments
May 13, 2010	<ul style="list-style-type: none"> • Motion to honor R. Keith • Motion on frequency of CAC meetings • Light Rail and Metro collision data • Station Area Advisory Committee process • Ridership and capacity • Presentation of video simulation of West Side
July 8, 2010	<ul style="list-style-type: none"> • Ridership and capacity • Redevelopment opportunities • State Budget and Legislative Report • Crossover in Lombard Street Tunnel
September 9, 2010	<ul style="list-style-type: none"> • Response to capacity analysis • Annual report planning • Station area planning process
November 4, 2010	<ul style="list-style-type: none"> • Joint follow-up response to capacity analysis • Annual report • Station area planning process
January 13, 2011	<ul style="list-style-type: none"> • Follow-up response to capacity analysis • Introduction of Community Liaisons • Status of FTA New Starts process • Design options for Edmondson Avenue segment
March 10, 2011	<ul style="list-style-type: none"> • Final follow-up response to capacity analysis • Design options for Boston Street segment • Update on SAACs • Map documentation of project impacts

Table 8-6: CAC Meetings and Topics

Meeting Date	Major Topics
May 12, 2011	<ul style="list-style-type: none"> • CAC vacancies • Update on project outreach activities • Status of FTA New Starts process • Map documentation of project impacts • Design options for Edmondson Avenue segment • CAC committees
July 14, 2011	<ul style="list-style-type: none"> • Safety and security • Proposal for CAC committees • Proposed modifications to LPA • Project expenditures to date • Framework for special Edmondson Avenue meeting
September 8, 2011	<ul style="list-style-type: none"> • Adoption of annual report • Format for special meetings for Edmondson Avenue residents • What happens during Preliminary Engineering phase • SAAC reactions to proposed modifications to LPA • Project expenditures to date
January 12, 2012	<ul style="list-style-type: none"> • Bylaws amendment • Neighborhood community development • Economic empowerment • Construction and operation impacts & mitigation • Funding status • Design status • Meetings for I-70 communities • SAAC progress
February 9, 2012	<ul style="list-style-type: none"> • Presentation: Update of SAAC – Subcommittee Informational Session
March 8, 2012	<ul style="list-style-type: none"> • Public participation guidelines • Neighborhood community development • Economic empowerment • Construction and operation impacts & mitigation • Funding status • I-70 public meeting summary
May 10, 2012	<ul style="list-style-type: none"> • Neighborhood community development • Economic empowerment • Construction and operation impacts & mitigation • MTA employment opportunities • Surface station architectural concepts • Public meetings • Funding status • Legislative session summary
July 12, 2012	<ul style="list-style-type: none"> • Annual Report • Screening of updated project video • Funding status • Open House summary

Table 8-6: CAC Meetings and Topics

Meeting Date	Major Topics
September 13, 2012	<ul style="list-style-type: none">• Annual Report• Construction and operation impacts & mitigation• Economic empowerment• Neighborhood community development• FEIS timetable• Summer outreach summary• Architectural concepts for underground stations

Source: *Public Involvement Technical Report, 2012*

9. AA/DEIS Public Comments Summary

9.1 Introduction

The Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) for the Red Line Corridor Transit Study was approved on September 2, 2008. Subsequently, the document was made available to the public and appropriate federal, state, and local agencies for review and comment. (Refer to the Distribution List in the Appendix of the AA/DEIS, pages A-6 and A-7.) The formal Notice of Availability was published in the Federal Register on October 3, 2008 initiating the 90-day public review and comment period (October 3, 2008 through January 5, 2009). Comments received during this period were in the form of written correspondence (which included letters, emails, and comment forms) and verbal testimony at one of four public hearings held for the project. For additional information about the public involvement associated with the AA/DEIS, refer to **Chapter 8** of this Final Environmental Impact Statement (FEIS).

Changes to this Chapter since the AA/DEIS

This is a new chapter for the FEIS. This chapter summarizes the comments received during the 90-day public comment period and provides the context for **Appendix A** of this FEIS where the official response to each of the 729 comments including six petitions received is provided. Issues raised in the comments have also been addressed throughout this FEIS where appropriate.

9.2 Summary of Comments Received

Of the total comments received, 164 comments were from elected officials, agencies, or organizations, 559 from individuals, and six petitions. During the 90-day public review and comment period there were multiple ways comments could be submitted to the Maryland Transit Administration (MTA): email or online comment form through the project website, oral testimony at four public hearing meetings, letters addressed to the MTA or Federal Transit Administration (FTA), or hard copy comment forms available at the public hearings or locations where the document was available for public review. A summary of the comments received by method is listed below. Please note that some organizations and individuals commented using more than one method or submitted multiple emails, letters, comment forms, or testimonies. Each individual comment has been counted once, regardless of who submitted the comment.

9.3 Response to Common Themes in Comments Received

The comments received included many common themes or issues raised. The following is a summary of the most common themes and issues raised in the AA/DEIS comments received and a response is shown in *italics*.

9.3.1 Support for Red Line Project

Comments were received which did not specify support for a specific alternative, as presented in the AA/DEIS, but supported the Red Line project in general and emphasized the need for transit improvements in the Baltimore Region.

The Preferred Alternative presented in the FEIS improves transit in the Baltimore Region, as your comment recommends. The Preferred Alternative is a light rail transit line, with tunnels under

downtown Baltimore and Cooks Lane, primarily surface in other portions of the corridor, and a limited amount of aerial structure. Since 2009, refinements and enhancements to the 2009 Locally Preferred Alternative have been made based upon further environmental analysis, engineering, cost estimating, geotechnical investigation, input from stakeholders, and the public involvement program. Some of these refinements include new alignment along Security Boulevard as opposed to through the Security Square Mall property, alignment along I-70 and the highway ramp from I-70 westbound to I-695 northbound, slight extension of the Cooks Lane tunnel, new alignment along Franklintown Road, tunnel under Fremont Avenue, new aerial from Norfolk Southern right-of-way over I-895 to Johns Hopkins Bayview Medical Center, and new alignment on the Bayview Campus. These refinements, along with the decrease from 20 stations to 19 stations, have resulted in the Preferred Alternative presented in the FEIS. A description of the Preferred Alternative can be found in Chapter 2 of the FEIS. An evaluation of the Alternatives which led to the Preferred Alternative can be found in Chapter 7 of the FEIS. The Preferred Alternative meets the project purpose and need and also is consistent with your comments on the need for the Red Line Build Alternative.

9.3.2 Requesting the No-Build Alternative

Comments were received requesting selection of the No-Build Alternative, rather than support the Red Line project. While some comments provided no justification for this request, others suggested that the project is not needed, the resultant impacts to residences would not justify the need, or MTA should focus on improving existing services.

The No-Build Alternative represents the future conditions of transportation facilities and services in 2035 if the Red Line is not built. The No-Build Alternative integrates forecasted transit service levels, highway networks and traffic volumes, and demographics for the year 2035 for projects identified in the 2011 Baltimore Regional Transportation Board's Constrained Long Range Plan (CLRP), Plan It 2035. The CLRP consists of the existing highway and transit network as well as planned and programmed (committed) transportation improvements. The No-Build Alternative represents a continued investment in regional and local transportation projects, but does not address the purpose and need of reducing travel times, increasing transit accessibility, providing transportation choices for east-west commuting, or supporting community revitalization and economic development opportunities.

Under the No-Build Alternative, existing and future populations along the study corridor would continue to be served by the local bus system, with only planned and programmed transit improvements. Congestion on the roadways and highways would continue to negatively impact the reliability of travel by automobile and bus. The No-Build Alternative end-to-end transit travel time in 2035 is projected to be 79 minutes, whereas The Preferred Alternative would operate with an end-to-end transit travel time of 45 minutes, nearly half the travel time of the No-Build Alternative.

The Preferred Alternative would improve the quality of east-west transit service along the project study corridor by providing frequent and reliable service. Light rail traveling in a dedicated right-of-way would not be subject to congested roadway conditions, resulting in dependable, on-time service. The Preferred Alternative would provide park-and-ride facilities and feeder bus service to enhance access to the rail transit service and expanding the ridership

market. *The Preferred Alternative will not require any acquisition of real property that would result in an involuntary residential displacement.*

Chapter 7 of the FEIS compares the No-Build Alternative with the Preferred Alternative while providing detailed information on transit efficiency and accessibility, transportation choices, system wide transit connections, and community revitalization and economic development.

9.3.3 Support for Alternative 4C

Several comments were received expressing support of Alternative 4C as presented in the AA/DEIS. Other comments noted support for Alternative 4C with various modifications.

The Locally Preferred Alternative selected in 2009 by the State of Maryland, with input from local governments, most closely resembles Alternative 4C in the AA/DEIS. Alternative 4C in the AA/DEIS was light rail in mode, with tunnels under downtown Baltimore and Cooks Lane, primarily surface in other portions of the corridor, and a limited amount of aerial structure. Since 2009, refinements and enhancements to the 2009 Locally Preferred Alternative have been made based upon further environmental analysis, engineering, cost estimating, geotechnical investigation, input from stakeholders, and the public involvement program. Some of these refinements include new alignment along Security Boulevard as opposed to through the Security Square Mall property, alignment along I-70 and the highway ramp from I-70 westbound to I-695 northbound, slight extension of the Cooks Lane tunnel, new alignment along Franklinton Road, tunnel under Fremont Avenue, new aerial from Norfolk Southern right-of-way over I-895 to Johns Hopkins Bayview Medical Center, and new alignment on the Bayview Campus. These refinements along with the decrease from 20 stations to 19 stations, have resulted in the Preferred Alternative presented in the FEIS. A description of the Preferred Alternative can be found in Chapter 2 of the FEIS.

9.3.4 Support for a Heavy Rail Alternative

Comments were received stating that a heavy rail alternative should be studied in the AA/DEIS.

Two alternatives which incorporated Heavy Rail were considered in the AA/DEIS for the Red Line. They were described in Chapter 2, page 29 of the AA/DEIS. Each of these alternatives was proposed by members of the public.

The first of the two alternatives was a full Heavy Rail Alternative from Social Security Administration to Greektown, 14.3 miles. This alternative was estimated to cost \$2.383 Billion in 2007 dollars. The alternative was not carried forward through full analysis in the AA/DEIS due to its high capital cost as compared to Light Rail and Bus Rapid Transit Alternatives being studied. The Preferred Alternative for the Red Line in the FEIS has a cost of \$2.575 Billion in year-of-expenditure dollars. The year-of-expenditure dollars are based on a schedule that has the Red Line opening in 2021 and escalation occurring at a rate of +3.1 percent per year. Escalating the previously studied Heavy Rail Alternative capital cost at the same rate that is being used for the Preferred Alternative, with a project opening in 2021 and a mid-point of construction in the year 2018, yields a year-of-expenditure capital cost of \$3.334 Billion. This cost estimate for Heavy Rail is \$759 Million higher than the Preferred Alternative. This 30 percent cost differential still renders the Heavy Rail Alternative as too costly when compared with the Preferred Alternative.

In addition, there are other aspects of this proposed Heavy Rail Alternative that could bring into question its feasibility, could lead to higher capital costs, and/or create environmental impacts that would need to be addressed. These include constructing adjacent to the Amtrak Northeast corridor and within Amtrak right-of-way; constructing connections with the existing Baltimore Metro and the need to shut down Metro service while that construction occurred, likely six to nine months at a minimum; additional property takes along Amtrak right-of-way; visual impacts of an aerial alignment from Orangeville to Greektown; potential 4(f) impacts from being in a tunnel under Leakin Park due to associated ventilation or emergency egress that may be required; and viability of an at-grade alignment along I-70.

The second of the two alternatives was not a full Heavy Rail Alternative, but a combination of three modes – Heavy Rail, Light Rail, and Streetcar. The Heavy Rail component extended the existing Metro from Johns Hopkins Hospital to the Johns Hopkins Bayview Medical Center. From Centers for Medicare & Medicaid Services (CMS) to the western portion of downtown, the Alternative would be light rail similar to the Preferred Alternative. Upon entering downtown, the light rail would be surface to Camden Yards, and then would be in tunnel to the existing Charles Center Metro Station. The third component would be a streetcar from Camden Yards, with surface operations along Pratt Street and through Harbor East, Fell's Point, Canton, Canton Crossing, and Haven Street to the Amtrak right-of-way, ending at Edison Highway. The streetcar alternative would run in mixed traffic along the surface. This Alternative was estimated to have a capital cost of \$1.8 Billion in 2007 dollars. Escalated at 3.1 percent per year yields a cost of \$2.518 Billion in year-of-expenditure dollars. This cost is comparable to the Preferred Alternative, just as it was similar to the costs of the light rail and bus rapid transit alternatives in the AA/DEIS. The reasons this alternative were not studied further in the AA/DEIS are:

- *Many east-west trips through the corridor would require transfers due to the multiple modes, increasing transit travel time and decreasing ridership.*
- *The entire streetcar component requires sharing lanes with traffic, which degrades both vehicular traffic movements, as well as transit travel times, and would reduce ridership.*
- *Introducing a new mode, streetcar, requires an additional new maintenance facility for streetcars and introduces a new mode of transit to Baltimore, which does not improve transit efficiency.*

Refer to Section 2.4.2 in the Alternatives Technical Report – 2012 Update for additional information, located in Appendix I.

9.3.5 Economic Development/Employment

Many comments were received from organizations and individuals citing the benefit of the Red Line in improving the job market. The reasons cited included: improved access to jobs and the creation of permanent and construction jobs.

The MTA and Baltimore City are working on workforce development programs that are intended to lead to future employment and training opportunities for local area residents, as well as expanded opportunities for local small (disadvantaged) businesses. The intent is for the area economy to benefit from the job creation and economic development the Red Line project can

generate. The MTA anticipates having a policy and program in place before construction contracts are advertised for the Red Line project.

9.3.6 Home/Property Loss

The AA/DEIS stated several times that there would be no residential displacements with any of the Red Line Alternatives, including the Preferred Alternative. However, many comments were received from residents on the west side of the project study corridor concerned about the loss of their home or property from the Red Line.

The Preferred Alternative will not require any acquisition of real property that would result in an involuntary residential displacement. The majority of the Red Line would be constructed within the public right-of-way; however, there are areas where the Red Line would require additional property. There will be the need to acquire “sliver takes” or narrow strips of property from some residential properties adjacent to and along the Red Line. Just compensation will be paid for all land that is acquired. These partial property acquisitions will leave the majority of land in the ownership of the current proprietor. A listing of property acquisitions is included in Appendix K of the FEIS.

9.3.7 Protection of Homes During Construction

Several comments were received asking how the MTA would ensure building foundations are not compromised during the construction of the Red Line.

It would be necessary to use protective measures to support building foundations as part of tunnel or station excavation, where unavoidable. These measures are often utilized to reduce potential for damage caused by construction-induced movement.

Both the Cooks Lane Tunnel and Downtown Tunnel alignments and stations have been planned to avoid construction beneath existing buildings and other structures wherever possible. However, there are a few areas where this cannot be avoided. In addition, in some other areas, existing structures would be very close to excavation sites or the tunnel’s alignment. In both of these cases, a variety of measures, including underpinning, grouting, and building external support frames or bracing structures would be used to protect nearby structures during and following construction. Types of protective measures for the Red Line include ground improvements, bracing structures, and underpinning nearby structures. Prior to construction, pre-construction conditions would be documented through baseline surveys and visual inspections for buildings that are directly adjacent to the alignment. These conditions can then be compared with any changes after construction and may be used as the basis for compensation.

9.3.8 Project Disproportionately Affects Minority and Low-income Communities

Eight organizations or individuals submitted comments stating the opinion that the project violates environmental justice legislation or Title VI of the Civil Rights Act. These comments were from organizations or individuals on the west side of the project study corridor who felt their comments were not being heard or addressed. They felt their communities were being

impacted by a surface alignment when other communities had tunnel alignments, and that their communities would not benefit from the Red Line.

The FTA Office of Civil Rights has reviewed the environmental justice and Title VI complaints and either dismissed or found them insufficient. The FTA has not found any violation of Title VI of the Civil Rights Act, or the Community Right to Know Act.

In addition, Section 5.4 of the FEIS sets forth the detailed analysis performed to evaluate whether the Red Line would have a disproportionately high and adverse human health and environmental effects to minority and low-income communities that would result from the construction and operation of the Preferred Alternative. Since the AA/DEIS was published, the MTA has continued extensive public outreach with communities throughout the corridor, updated the environmental justice analysis with the 2010 US Census data, and continued coordinating with the FTA Office of Civil Rights. Refer to FEIS Chapters 5 and 8.

Overall, the Red Line would improve accessibility for all communities including low-income and minority populations. While some impacts would occur within these communities, the impacts of the project on minority and low-income communities are not disproportionately high and adverse, and the project benefits these same communities by providing improved accessibility and faster, more reliable transit.

9.3.9 Inadequate Public Outreach

Comments were received stating that citizens were not notified of the project or the public hearings.

The Baltimore Red Line planning study included a comprehensive public involvement program that was integral to the overall study effort. Public involvement activities began in Spring 2003 with the distribution of direct mail and e-mails announcing scoping meetings to approximately 84,280 homeowners and businesses, 214 associations and community groups, and over 1,450 individual e-mail addresses. Between 2004 and 2007, the MTA held five sets of open houses. From November 2004 to May 2005, four rounds of Community Workings Groups were held. Letters and project fact sheets were mailed to 249 religious institutions March 2005. Seventy-eight community meetings were held between September 2005 and March 2008. In 2006, the Maryland General Assembly passed a bill creating the Red Line Citizens' Advisory Council (CAC). The CAC advised the MTA on impacts, opportunities and community concerns about the Baltimore Red Line through the duration of the planning study. From 2010 to 2012 seventeen Station Area Advisory Committees (SAACs) were formed to provide input on the Red Line project development. Each of the SAACs met approximately ten times during that time frame.

Between project initiation and the 2008 public hearing, MTA developed 9 separate project newsletters distributed to the Red Line mailing list. Additionally, regular (monthly/bi-monthly) e-newsletters have been distributed to subscribers to the project's e-mail registry. Throughout planning, project information was made available at 34 resource hubs throughout the project area. MTA also made available a Red Line project website (www.baltimoredline.com). Downloadable materials included a map and simulation of the Preferred Alternative, photos,

fliers, e-newsletters, news articles, brochures, videos. Refer to Chapter 8 of the FEIS for additional information.

9.3.10 Rodent Control During Construction

Several comments were received expressing concern of rodent infestations in homes during construction of the Red Line.

Construction contractors will be required to implement rodent (mouse and rat) control programs.

9.3.11 Red Line and Bikes

Several comments were received regarding the Red Line accommodating bicycles, incorporating trail-to-rail in the design, and accommodating bicycles on the street.

Accommodate cyclists on transit line: The Red Line will allow bicycles on trains and will have accommodations for bicycles at Red Line stations.

Maximize trail by rail: Trails adjacent or parallel to the Red Line were considered during the development of the Preferred Alternative for the FEIS, but were not included in the definition of the Preferred Alternative due to additional capital cost and/or right-of-way impacts.

Share the road: The majority of the Preferred Alternative is not surface light rail within a roadway. However, in one location where light rail will be located in the median, the road will be revised to include a seven foot wide bike lane. That location is along Boston Street between Hudson Street/Montford Avenue to Eaton Street.

9.3.12 Concerns of Increased Crime

A common reason given in comments for not supporting the project was that the Red Line would result in increased crime in their community.

The Red Line is being designed with safety and security measures. Vehicles, station platforms, and parking lots will include closed circuit video cameras for observation and enforcement. The project design will also incorporate features to optimize sight lines for enhanced security. The MTA police force will patrol light rail vehicles, stations, and other project infrastructure.

9.3.13 Pedestrian Safety along Edmondson Avenue and Boston Street

A common theme in the comments received was that the Red Line in the median of Edmondson Avenue or Boston Street would make it unsafe for pedestrians.

The Red Line project would include designated pedestrian crossings along Edmondson Avenue and Boston Street. The Americans with Disabilities Act (ADA)-compliant crosswalks will have traffic signals with indications for safe pedestrian movements. The traffic signals will provide adequate time for pedestrians to walk across the entire width of Edmondson Avenue and Boston Street. Pedestrian refuge medians would be provided in the center of Edmondson Avenue and Boston Street for increased safety.

9.3.14 Requesting a Tunnel under Edmondson Avenue and Cooks Lane

Generally, these comments requested that if the Red Line is built it be placed underground as opposed to on the surface through Cooks Lane and/or along Edmondson Avenue.

The Preferred Alternative is located on the surface (at grade), generally within the median of Edmondson Avenue between the Cooks Lane Tunnel portal and the West Baltimore MARC station. There is adequate right-of-way available to construct light rail in the median without the need to purchase or relocate any residential homes. As such, an underground alternative is not needed to preserve adjacent land use. Also, the impact assessments for resources along Edmondson Avenue indicate that a surface alternative is feasible in this area of the project (see the FEIS, Chapter 2 and the Alternatives Technical Report – 2012 Update for more detail). In the AA/DEIS, tunnel alignments were studied under Edmondson Avenue/Franklin Street between Cooks Lane and Calverton Road. The major reason that a tunnel alignment was not pursued was cost. In order to design and construct that portion of the project underground, the cost of the project would increase by \$525 million in year of expenditure dollars. Refer to Chapter 2 of the FEIS for additional information.

9.3.15 Effects on Traffic on Edmondson Avenue with the Red Line

Several comments noted that a surface alignment on US 40/Edmondson Avenue would result in traffic problems in their community. Traffic analysis for the Preferred Alternative has been updated in support of the FEIS. This analysis for US 40/Edmondson Avenue is summarized in the response below. Refer to **Chapter 4** of the FEIS and the *Traffic and Parking Technical Report* in **Appendix I** for additional information.

Building the Red Line transit system would require that changes be made to a number of roadways along the Red Line project study corridor. Currently, on Edmondson Avenue, three lanes are provided during the peak hour in the peak direction. Under the Preferred Alternative the three available lanes would be reduced to two lanes in each direction to accommodate the Red Line in the median.

Street patterns may be modified in a number of other ways including: new turn restrictions, removing signals, closing some median openings, and installing new traffic signals at several intersections along the Red Line alignment where the light rail would cross the roadway. The plans and profiles provided in the Volume 2 of the FEIS provide greater detail on these roadway modifications.

Traffic volumes along Edmondson Avenue, without the Red Line, are projected to increase by approximately 18 percent by 2035. With the Red Line, traffic volumes are expected to remain relatively unchanged compared to current conditions, due to the reduction in lanes and capacity to accommodate the Red Line in the median.

Levels of Service (LOS) were evaluated at signalized intersections along Edmondson Avenue for both the 2035 No-Build and the 2035 Build Condition. The assessment indicates the following changes in LOS:

- *Edmondson Avenue at Winans Way – From (A) to (C) during (PM) peak hour*

- *Edmondson Avenue at Swann Avenue – From D (D) to C (E) during AM (PM) peak hour*
- *Edmondson Avenue at Edmondson Shopping Center – From A (A) to B (C) during AM (PM) peak hour (Converted from signalized to unsignalized intersection in Build conditions)*
- *Edmondson Avenue at Wildwood Parkway – From B (B) to D (D) during AM (PM) peak hour*
- *Edmondson Avenue at Allendale Street – From A to C during AM peak hour*
- *Edmondson Avenue at Hilton Street – From A to D during AM peak hour*

LOS was evaluated at unsignalized intersections along Edmondson Avenue. The assessment indicated the following change in LOS:

- *US 40 (Edmondson Avenue) at Denison Street – From F (F) to A (B) during AM (PM) peak hour as it is converted to signalized intersection in build year*

During construction, impacts to the public would be minimized through the implementation of Traffic and Transportation Management Plans. Access to local businesses would be provided where possible with existing or temporary driveways; however, there may be some instances where access cannot be maintained. In these cases, other accommodations would be arranged with the property owner. Specific mitigation would be developed during Final Design to determine the maximum number of lanes which may be closed during peak traffic hours, maintenance and removal of traffic control devices, efficient traffic detours, and construction schedule restrictions. A detailed outreach plan will be developed prior to construction.

9.3.16 Parking Impacts along US 40/Edmondson Avenue

One reason frequently expressed in opposition to the Red Line on US 40/Edmondson Avenue was the loss of on-street parking in their community.

The implementation of the Red Line will require the elimination of some parking spaces along the corridor. Under the Preferred Alternative 58 on-street parking spaces would be eliminated along Edmondson Avenue between Cooks Lane and Franklinton Road. For those parking spaces that remain along Edmondson Avenue, vehicles may be parked 24-hours a day. MTA will work with the contractor to develop a plan to minimize the temporary loss of parking during construction. Refer to the Traffic and Parking Technical Report in Appendix I for additional information.

9.3.17 Support for a Tunnel under Fleet Street over Aliceanna Street

Several comments were received from residents in the Fell's Point neighborhood supporting a tunnel through their community over a surface option. Some of these comments expressed support for a tunnel alignment beneath Fleet Street instead of Aliceanna Street.

The Preferred Alternative for the Red Line now includes a tunnel through Fell's Point under Fleet Street not Aliceanna Street with the Harbor East Station located at Fleet Street and Central Avenue and the Fell's Point Station at Fleet Street and Broadway. With the decision to have a portal at Boston Street and Hudson Street/Montford Avenue, a tunnel under Fleet Street

provided a better geographic transition. A tunnel from Fleet to Boston Streets only required one horizontal curve. A tunnel from Fleet to Aliceanna Streets would have required an additional curve which would have increased capital costs and increased travel time.

9.3.18 Supports Red Line but not an Alignment on Boston Street (Canton)

Comments were received requesting that an alternative alignment be selected that would not include Boston Street. Some of these comments requested the Red Line alignment be shifted to Eastern Avenue and Fleet Street. Because of the existing street widths, sidewalk widths, and building face locations, Eastern Avenue and Fleet Street could not be widened for the inclusion of light rail. All of the surface options were deemed infeasible because of the impacts to parking or impacts to roadway capacity and local access.

In selecting the Preferred Alternative there were many critical considerations including quality of transit service, projected transit ridership, cost-effectiveness, land use/transportation integration, economic development potential, environmental impacts, impacts to communities, and public and stakeholder input. To meet the project's purpose and need, it was important to connect people with key activity centers such as the Social Security Administration, University of Maryland downtown, central business district, Harbor East, and Johns Hopkins Bayview Medical Center campus. Transit connections to MARC and existing Metro and Central Light Rail were also critical to meeting the purpose and need.

The Boston Street corridor was selected as part of the Preferred Alternative because it represented the option with the least parking and traffic impacts when compared to the other surface options along Eastern Avenue and Fleet Street. It was also \$412 million less to construct than a tunnel under Eastern Avenue. Ridership projections for the option along Boston Street were also comparable to options in the Eastern Avenue/Fleet Street corridor. Refer to the Alternatives Technical Report – 2012 Update for additional information.

9.3.19 Supports an Alignment on Eastern Avenue not Boston Street

Several comments noted support for the AA/DEIS Alternative 4D, which included a tunnel under Eastern Avenue, or support for a surface alignment on Eastern Avenue or Fleet Street as an alternative to a Boston Street alignment. The AA/DEIS included analysis of the three surface alignments as Eastern-Fleet one-way couplets and a tunnel under Eastern Avenue.

Various alternatives were analyzed in the AA/DEIS to use the Eastern Avenue/Fleet Street corridors. These alternatives were not selected as part of the Preferred Alternative due to lack of feasibility or high capital costs. Key reasons that the Eastern/Fleet Alternatives were not selected are described below.

Tunnel Option: A tunnel alternative along Eastern Avenue from the downtown area to the Norfolk Southern right-of-way, north of Eastern Avenue, was considered. The costs of this alternative, due to both the tunnel and underground stations, would increase the cost of the Red Line by \$412 million, in year of expenditure dollars.

Eastern-Fleet surface LRT Option: Three surface options were considered in the AA/DEIS. The first option maintained two-way traffic on Eastern Avenue and Fleet Street with elimination of all parking on one side of each street. Light rail tracks would be separated with one directional track along Eastern Avenue and the other directional track along Fleet Street. Each of the other two surface options created one-way streets on both Eastern Avenue and Fleet Street with one lane for traffic, one lane for light rail, and two lanes for parking. Due to the existing street widths, sidewalk widths, and building face locations, Eastern Avenue and Fleet Street could not be widened for the inclusion of light rail. All of the surface options were deemed infeasible because of the impacts to parking or impacts to roadway capacity and local access.

Refer to the Alternatives Technical Report- 2012 Update for additional information.

In a letter dated May 7, 2012, FTA and MTA received a report recommending additional consideration of light rail alternatives located on Eastern Avenue. Refer to b'more mobile, "The Case for Eastern Avenue on The Red Line" (May 2012) included in *Appendix H of the Alternatives Technical Report – 2012 Update*, included in **Appendix I** of the FEIS. The report claimed that an Eastern Avenue route would serve more local users overall, and that it would better serve transit users in minority and low-income neighborhoods and therefore was more consistent with principles of environmental justice. FTA responded in a letter dated May 25, 2012, noting that environmental justice issues were being analyzed and would be addressed in the FEIS. In addition, MTA responded in a letter dated October 1, 2012. The MTA responses addressed the specific issues raised in the report in more detail and reaffirmed MTA's preference for the Boston Street alignment. The MTA cited several reasons, including: (1) the Boston Street alignment is more consistent with the project's purpose and need because it provides a direct connection to the Canton area; (2) the proposed alignment along Boston Street is consistent with environmental justice requirements; and (3) the cost and impact of an Eastern Avenue route, whether surface or tunnel, would be substantially greater than estimated in the b'more mobile report. FTA has reviewed MTA's response to the b'more mobile report and concurs with MTA's response. Refer to the *Alternatives Technical Report – 2012 Update, Appendix H* for additional information and copies of the b'more report and response letter.

9.3.20 Extend the Tunnel Further East Under Boston Street

Some comments received stated support for extending the tunnel further to the east under Boston Street. The Preferred Alternative includes a tunnel under a portion of Boston Street from Aliceanna Street to Hudson Street, transitioning to the surface and continuing in the median of Boston Street to South Conkling Street.

There is adequate right-of-way available to construct light rail in the median without the need to purchase or relocate any residential homes or businesses. As such, an underground alternative is not needed to preserve adjacent land use. Also, the impact assessments for resources along Boston Street indicate that a surface alternative is feasible in this area of the project (see the FEIS, Chapter 2 and the Alternatives Technical Report – 2012 Update for more detail). The major reason that a tunnel alignment was not pursued along Boston Street was cost. In order to design and construct that portion of the project underground, the cost of the

project would increase by \$210 million, in year of expenditure dollars. Refer to the Alternatives Technical Report – 2012 Update for additional information.

9.3.21 Effects on Traffic on Boston Street with the Red Line

Several comments noted that traffic congestion on Boston Street is a current problem that would get worse with a Red Line surface alignment on Boston Street. Traffic analysis for the Preferred Alternative has been updated in support of the FEIS. This analysis for Boston Street is summarized in the response below.

Building the Red Line transit system would require that changes be made to a number of roadways along the Red Line alignment corridor. Currently, two travel lanes in each direction are provided during the peak hour in the peak direction along Boston Street between Hudson Street and South Lakewood Avenue. Between South Lakewood Avenue and Clinton Street there are currently two travel lanes in each direction at all times. Under the Preferred Alternative, there would be one travel lane in each direction at all times for the entire length of Boston Street.

Street patterns may be modified in a number of other ways, including: new turn restrictions and removing or installing new traffic signals at several intersections along the Red Line alignment where the light rail would cross high volume side streets. The detailed plans and profiles provided in the Volume 2 of the FEIS provide greater design detail. Refer to Chapter 4 of the FEIS and the Traffic and Parking Technical Report in for additional information.

Without the Red Line, traffic volumes along Boston Street, north of Montford Avenue, are projected to increase by approximately 33 percent by 2035 and volumes east of Conkling Street are projected to increase by 56 percent by 2035. With the Red Line by 2035, traffic volumes along Boston Street are projected to increase by 22 percent north of Montford Avenue and increase by 25 percent east of Conkling Street.

Levels of Service (LOS) were evaluated at signalized intersections along Boston Street for both the 2035 No-Build and the 2035 Build Condition. The assessment indicated the following changes in LOS:

- *Boston Street at Aliceanna Street – From (F) to (B) during (PM) peak hour*
- *Boston Street at Montford Ave – From E to D during AM peak hour*
- *Boston Street at Ellwood Ave – From (A) to (D) during (PM) peak hour (Converted from signalized to unsignalized in Build conditions)*
- *Boston Street at Clinton Street – From F to E during AM peak hour*
- *Boston Street at Old Boston Street – From D (C) to E (E) during AM (PM) peak hour*

LOS was evaluated at unsignalized intersections along Boston Street. The assessment indicated the following changes in LOS:

- *Boston Street at Leakin Street – From F to better F during AM peak hour*

- *Boston Street at Safeway – From (D) to (A) during (PM) peak hour as it is converted to a signalized intersection in the Build year*
- *Boston Street at Kenwood Ave – From F (F) to D (D) during AM (PM) peak hour as it is converted to a signalized intersection in the Build year*
- *Boston Street at East Ave – From F to C during AM peak hour as it is converted to a signalized intersection in the Build year*
- *Boston Street at Bayliss Street – From F to B during AM peak hour*

During construction, impacts to the public would be minimized through the implementation of Traffic and Transportation Management Plans. Access to local businesses through existing or temporary driveways would be provided where possible; however, there may be some instances where access cannot be maintained. In these cases, other accommodations would be arranged with the property owner. Specific mitigation would be developed during Final Design to determine maximum number of lanes closed during peak traffic hours, maintenance and removal of traffic control devices, efficient traffic rerouting measures, and scheduling of construction activities within the roadways for times other than peak traffic periods.

9.3.22 Parking Impacts on Boston Street

One reason expressed in several comments received in opposition to the Red Line on Boston Street was the loss of on-street parking in their community.

The implementation of the Red Line will require the elimination of parking spaces along the corridor. Currently, there are 239 total parking spaces, 161 full-time and 78 part-time parking spaces, along Boston Street between Hudson/Montford to Haven Street. Under the Preferred Alternative, 126 parking spaces (both on-street and off-street) would be displaced. For those parking spaces that remain along Boston Street, vehicles may be parked 24-hours a day. The proposed park-and-ride at the Brewers Hill/Canton Crossing Station could provide temporary parking spaces during construction. Refer to Chapter 4 of the FEIS and the Traffic and Parking Technical Report for additional information.

9.4 Responses to Comments

A response has been prepared for each comment received during the AA/DEIS public review and comment period and is presented in **Appendix A** of the FEIS. For ease of finding a specific comment these have been categorized by Agency, Elected Official, Organization, and individuals alphabetized by the commenter's last name or agency/organization representing. An alphabetized index is also provided.

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